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(FILE 'HOME' ENTERED AT 09:55:51 ON 01 JUN 2005)

FILE 'HCAPLUS' ENTERED AT 09:55:56 ON 01 JUN 2005

E US2004-798796/APPS

L1 2 SEA ABB=ON PLU=ON US2004-798796/AP
SEL RN

FILE 'REGISTRY' ENTERED AT 09:56:15 ON 01 JUN 2005

L2 7 SEA ABB=ON PLU=ON (142-31-4/BI OR 151-21-3/BI OR 445473-58-5/
BI OR 502421-75-2/BI OR 502421-76-3/BI OR 79917-88-7/BI OR
79917-90-1/BI)

FILE 'HCAPLUS' ENTERED AT 09:56:22 ON 01 JUN 2005

L3 2 SEA ABB=ON PLU=ON L1 AND L2
D QUE
D L3 IALL HITSTR 1-2

FILE 'REGISTRY' ENTERED AT 09:58:06 ON 01 JUN 2005

L4 STR
L5 50 SEA SSS SAM L4
L6 STR
L7 SCR 2040
L8 50 SEA SSS SAM L7 AND L4 AND L6
L9 11147 SEA SSS FUL L7 AND L4 AND L6
L10 3 SEA ABB=ON PLU=ON L2 AND L9
D SCA
L11 9519 SEA ABB=ON PLU=ON L9 NOT (PMS OR IDS OR MAN)/CI
L12 7943 SEA ABB=ON PLU=ON L11 AND NC=2
L13 STR L6
L14 7235 SEA SUB=L12 SSS FUL L13
L15 3 SEA ABB=ON PLU=ON L2 AND L14

FILE 'HCAPLUS' ENTERED AT 10:07:39 ON 01 JUN 2005

L16 6673 SEA ABB=ON PLU=ON L14
L17 1840060 SEA ABB=ON PLU=ON SOLVENT? OR EXTRACT? OR HEAT CARRIER OR
IONIC LIQUID OR PHASE TRANSFER? OR HEAT TRANSFER?
L18 706 SEA ABB=ON PLU=ON L16 AND L17
E IONIC LIQUIDS/CT
E E3+ALL
L19 2076 SEA ABB=ON PLU=ON IONIC LIQUIDS+PFT/CT
E PHASE TRANSFER CATALYST/CT
E E4+ALL
L20 2954 SEA ABB=ON PLU=ON PHASE TRANSFER CATALYSTS+PFT/CT
E EXTRACTANTS/CT
E E3+ALL
L21 1680 SEA ABB=ON PLU=ON EXTRACTANTS+PFT,NT/CT
E SOLVENTS/CT
E E3+ALL
L22 52709 SEA ABB=ON PLU=ON SOLVENTS+PFT,NT/CT
E HEAT TRANSFER AGENTS/CT
E E3+ALL
L23 2433 SEA ABB=ON PLU=ON HEAT TRANSFER AGENTS+PFT/CT
L24 706 SEA ABB=ON PLU=ON L16 AND (L18 OR L19 OR L20 OR L21 OR L22
OR L23)
L25 126 SEA ABB=ON PLU=ON L16 AND (L19 OR L20 OR L21 OR L22 OR L23)
L26 163 SEA ABB=ON PLU=ON L14 (L) (SOLVENT? OR EXTRACT? OR HEAT

L27 CARRIER OR IONIC LIQUID OR PHASE TRANSFER? OR HEAT TRANSFER?)
L28 62 SEA ABB=ON PLU=ON L25 AND L26
2 SEA ABB=ON PLU=ON L27 AND L1
D QUE L27
D L27 IBIB ABS HITSTR 1-62

FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 1 Jun 2005 VOL 142 ISS 23
FILE LAST UPDATED: 31 May 2005 (20050531/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 30 MAY 2005 HIGHEST RN 851366-70-6
DICTIONARY FILE UPDATES: 30 MAY 2005 HIGHEST RN 851366-70-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

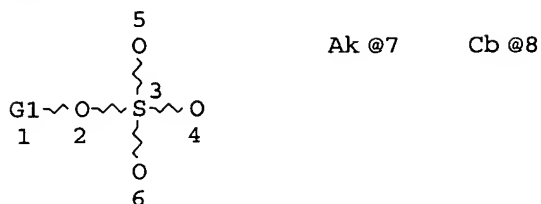
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d que 127

L4

STR



VAR G1=7/8

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 4

CONNECT IS E1 RC AT 5

CONNECT IS E1 RC AT 6

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 7

GGCAT IS SAT AT 8

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

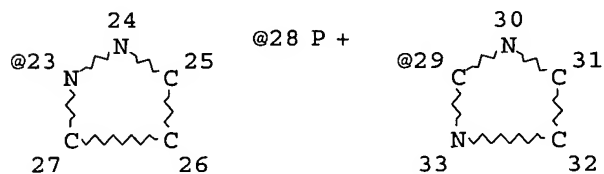
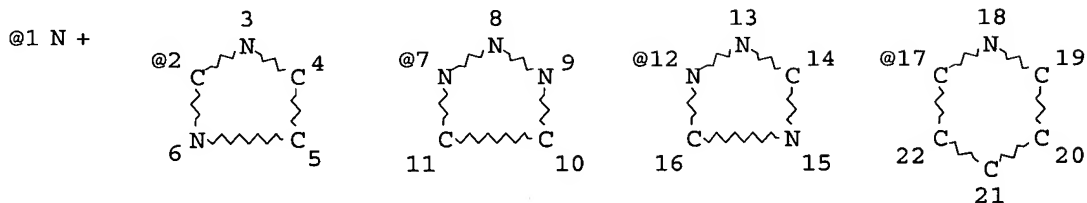
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L6

STR



G1 34

VAR G1=1/2/7/12/17/23/28/29

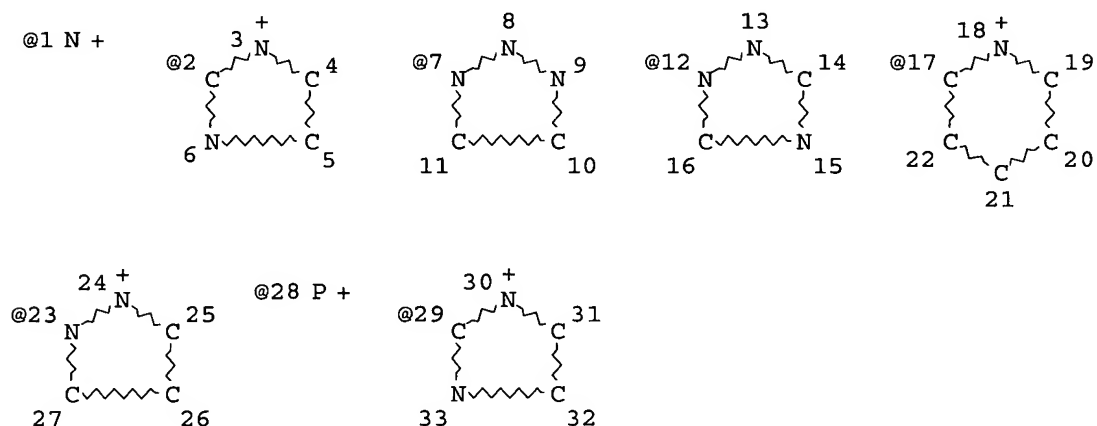
NODE ATTRIBUTES:

CHARGE IS *+ AT 1
 CHARGE IS *+ AT 28
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L7 SCR 2040
 L9 11147 SEA FILE=REGISTRY SSS FUL L7 AND L4 AND L6
 L11 9519 SEA FILE=REGISTRY ABB=ON PLU=ON L9 NOT (PMS OR IDS OR
 MAN)/CI
 L12 7943 SEA FILE=REGISTRY ABB=ON PLU=ON L11 AND NC=2
 L13 STR



G1 34

VAR G1=1/2/7/12/17/23/28/29

NODE ATTRIBUTES:

CHARGE IS *+ AT 1
 CHARGE IS *+ AT 3
 CHARGE IS *+ AT 18
 CHARGE IS *+ AT 24
 CHARGE IS *+ AT 28
 CHARGE IS *+ AT 30
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE

L14 7235 SEA FILE=REGISTRY SUB=L12 SSS FUL L13
L16 6673 SEA FILE=HCAPLUS ABB=ON PLU=ON L14
L19 2076 SEA FILE=HCAPLUS ABB=ON PLU=ON IONIC LIQUIDS+PFT/CT
L20 2954 SEA FILE=HCAPLUS ABB=ON PLU=ON PHASE TRANSFER CATALYSTS+PFT/C
T
L21 1680 SEA FILE=HCAPLUS ABB=ON PLU=ON EXTRACTANTS+PFT,NT/CT
L22 52709 SEA FILE=HCAPLUS ABB=ON PLU=ON SOLVENTS+PFT,NT/CT
L23 2433 SEA FILE=HCAPLUS ABB=ON PLU=ON HEAT TRANSFER AGENTS+PFT/CT
L25 126 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 AND (L19 OR L20 OR L21 OR
L22 OR L23)
L26 163 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) (SOLVENT? OR EXTRACT?
OR HEAT CARRIER OR IONIC LIQUID OR PHASE TRANSFER? OR HEAT
TRANSFER?)
L27 62 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L26

=> d l27 ibib abs hitstr 1-62

L27 ANSWER 1 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:275703 HCAPLUS

DOCUMENT NUMBER: 142:336042

TITLE: Preparation of halogen-free ionic liquids

INVENTOR(S): Tsukatani, Toshihide; Katano, Hajime; Tatsumi, Kosuke

PATENT ASSIGNEE(S): Nikka Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

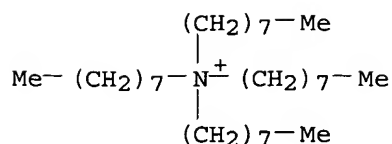
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

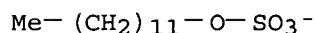
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2005082534	A2	20050331	JP 2003-316525	20030909
PRIORITY APPLN. INFO.:			JP 2003-316525	20030909
AB	Ionic liqs. (C ₈ H ₁₇) ₄ N+.RXSO ₃ - (I; R = C ₈ -14 alkyl; X = O, C ₆ H ₄) are prepared by ion exchange of RXSO ₃ M (R, X = same as I; M = monovalent metal) with (C ₈ H ₁₇) ₄ NZ (Z = halo) in H ₂ O-polar solvent mixts. and removing the polar solvents and H ₂ O. (C ₈ H ₁₇) ₄ NBr was treated with Na dodecyl sulfate in H ₂ O-Me ₂ CO at room temperature for 7 days, evaporated, separated from the aqueous phase to give 95% I (R = dodecyl, X = O), which showed m.p. 19.9°, viscosity 1100 mPa-s, elec. conductivity 2.7 + 10 ⁻⁵ S/cm, and nonvolatility.			
IT	301310-17-8P RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of tetraoctylammonium sulfates or sulfonates as halogen-free ionic liqs.)			
RN	301310-17-8 HCAPLUS			
CN	1-Octanaminium, N,N,N-trioctyl-, dodecyl sulfate (9CI) (CA INDEX NAME)			
CM	1			
CRN	19524-73-3			
CMF	C32 H68 N			



CM 2

CRN 557-47-1

CMF C12 H25 O4 S



L27 ANSWER 2 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:121160 HCAPLUS

DOCUMENT NUMBER: 142:206505

TITLE: Method for forming oxide film on metal surface using ionic liquid, electrolytic capacitor and electrolyte thereof

INVENTOR(S): Murakami, Mutsuaki; Tachibana, Masamitsu; Furutani, Hiroyuki; Yamagishi, Hideo

PATENT ASSIGNEE(S): Kaneka Corporation, Japan

SOURCE: PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005012599	A1	20050210	WO 2004-JP10996	20040726
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:

JP 2003-204299	A	20030731
JP 2003-310856	A	20030903
JP 2004-75625	A	20040317
JP 2004-82827	A	20040322
JP 2004-82838	A	20040322

AB Disclosed are a means for forming an oxide film on a metal surface, a means for repairing a defect in an oxide film, a high-performance electrolytic capacitor using such means, and an electrolyte of the capacitor. Specifically, disclosed is a method for easily forming an oxide film on the surface of a metal or an alloy thereof through anodizing wherein a solution containing an ionic liquid was used. An electrolytic capacitor

comprising a means for repairing a defect in the oxide film can be formed by using applications of such a method wherein an ionic liquid, a solution obtained by adding a salt into the ionic liquid, a conductive polymer or a solution obtained by adding the ionic liquid to a TCNQ salt was used as the electrolyte, and a valve metal or an alloy thereof was used as the metal.

IT 839672-85-4

RL: TEM (Technical or engineered material use); USES (Uses)
(ionic liq. containing; method for forming oxide film
on metal surface by anodizing in presence of ionic
liq., electrolytic capacitor and electrolyte thereof)

RN 839672-85-4 HCAPLUS

CN 1H-Imidazolium, 1-butyl-2,3-dimethyl-, 2-ethoxyethyl sulfate (9CI) (CA
INDEX NAME)

CM 1

CRN 597580-00-2

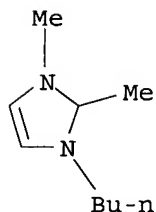
CMF C4 H9 O5 S

 $\text{EtO}-\text{CH}_2-\text{CH}_2-\text{O}-\text{SO}_3^-$

CM 2

CRN 108203-89-0

CMF C9 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:104407 HCAPLUS

DOCUMENT NUMBER: 142:338122

TITLE: Very stable and highly regioselective supported
ionic-liquid-phase (SILP) catalysis: Continuous-flow
fixed-bed hydroformylation of propene

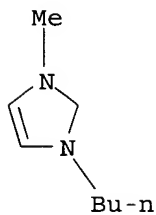
AUTHOR(S): Riisager, Anders; Fehrmann, Rasmus; Flicker, Stephan;
van Hal, Roy; Haumann, Marco; Wasserscheid, Peter

CORPORATE SOURCE: Department of Chemistry and Interdisciplinary Research
Center for Catalysis, Technical University of Denmark,
Kgs. Lyngby, 2800, Den.

SOURCE: Angewandte Chemie, International Edition (2005),
44(5), 815-819

PUBLISHER: CODEN: ACIEF5; ISSN: 1433-7851
Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The advantages of heterogeneous catalysis and transition-metal catalysis in ionic liqs. were combined in [Rh(acac)(CO)₂] bisphosphine [sulfoxantphos] and ionic-liquid [bmim][n-C₈H₁₇OSO₃] [bmim = 1-n-butyl-3-methylimidazolium] phase on silica gel support. The active, regioselective, and highly stable catalysts were used in a fixed-bed reactor for the continuous-flow gas-phase hydroformylation of propene.
 IT 445473-58-5
 RL: CAT (Catalyst use); USES (Uses)
 (ionic liq.; activity of regioselective Rh(acac)CO
 - bisphosphine - ionic-liq./silica catalysts in
 hydroformylation of propene)
 RN 445473-58-5 HCAPLUS
 CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)
 CM 1
 CRN 80432-08-2
 CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2
 CRN 45102-38-3
 CMF C8 H17 O4 S

Me⁻ (CH₂)₇-O⁻SO₃⁻

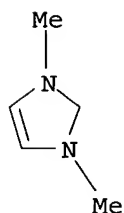
L27 ANSWER 4 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2005:59956 HCAPLUS
 DOCUMENT NUMBER: 142:165585
 TITLE: Ionic liquids as developability enhancing agents in multilayer imageable elements
 INVENTOR(S): Ray, Kevin B.; Pappas, S. Peter; Kalamen, John
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 13 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2005014644 A1 20050120 US 2003-621640 20030717
PRIORITY APPLN. INFO.: US 2003-621640 20030717
AB Thermally imageable, pos. working, multilayer imageable elements useful as lithog. printing plate precursors are disclosed. The elements comprise a substrate; an underlayer over the substrate; a top layer over the underlayer, and a photothermal conversion material. The top layer comprises a binder and an ionic liquid. A preferred binder is poly(Me methacrylate).
IT 97345-90-9, 1,3-Dimethylimidazolium methylsulfate
595565-55-2
RL: TEM (Technical or engineered material use); USES (Uses)
(ionic liq.; Ionic liq. as
developability enhancing agent for lithog. printing plate precursor)
RN 97345-90-9 HCAPLUS
CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4
CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 595565-55-2 HCAPLUS
CN 1H-Imidazolium, 1-methyl-3-octyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

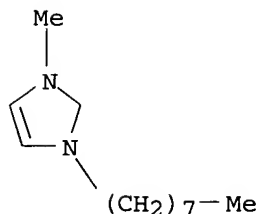
CM 1

CRN 595565-53-0
CMF C5 H11 O6 S

MeO-CH₂-CH₂-O-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 178631-03-3
CMF C12 H23 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

L27 ANSWER 5 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:23139 HCAPLUS

DOCUMENT NUMBER: 142:323738

TITLE: Standard molar enthalpy of formation of room temperature ionic liquid EMIES

AUTHOR(S): Zhang, Zhi-Heng; Guan, Wei; Yang, Jia-Zhen; Tan, Zhi-Cheng; Sun, Li-Xian

CORPORATE SOURCE: Department of Chemistry, Liaoning University, Shenyang, 110036, Peop. Rep. China

SOURCE: Wuli Huaxue Xuebao (2004), 20(12), 1469-1471
CODEN: WHXUEU; ISSN: 1000-6818

PUBLISHER: Wuli Huaxue Xuebao Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Using an RBC-II type oxygen-bomb combustion calorimeter, the molar combustion enthalpies of room temperature ionic liquid, 1-ethyl-3-methylimidazolium Et sulfate (EMIES), and 1-methylimidazole were determined at $T = 298.15 \pm 0.01$ K. For EMIES $\Delta_c H^\circ = -2671 \pm 2$ kJ·mol⁻¹ for 1-methylimidazole -286.3 ± 0.5 kJ·mol⁻¹. The standard formation enthalpies $\Delta_f H^\circ$ were calculated to be -3060 ± 3 kJ·mol⁻¹ for EMIES and -2145 ± 4 kJ·mol⁻¹ for 1-methylimidazole. The reaction of 1-methylimidazole with (C₂H₅)₂SO₄ to form EMIES is strongly exothermic and its reaction heat was determined to be -102.3 ± 1.0 kJ·mol⁻¹. The standard formation enthalpy of EMIES at different temps. was calculated on the basis of the heat capacity data of EMIES.

IT 342573-75-5, 1-Ethyl-3-methylimidazolium ethyl sulfate

RL: PRP (Properties)

(enthalpies of combustion and formation of room temperature ionic liq. EMIES)

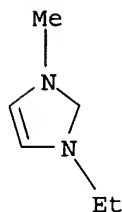
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L27 ANSWER 6 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2005:813 HCAPLUS
 DOCUMENT NUMBER: 142:96313
 TITLE: Halogen-free ionic liquids
 INVENTOR(S): Wasserscheid, Peter; Bosmann, Andreas; Van Hal, Roy
 PATENT ASSIGNEE(S): Germany
 SOURCE: U.S. Pat. Appl. Publ., 6 pp., Cont.-in-part of Appl.
 No. PCT/EP02/10206.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004262578	A1	20041230	US 2004-798796	20040311
DE 10145747	A1	20030403	DE 2001-10145747	20010917
WO 2003022812	A1	20030320	WO 2002-EP10206	20020911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: DE 2001-10145747 A 20010917
 WO 2002-EP10206 A2 20020911

OTHER SOURCE(S): MARPAT 142:96313

AB This invention relates to novel ionic liqs. with general formula [cation][RSO₄] [R = branched or linear, (un)saturated, aliphatic or alicyclic functionalized or non-functionalized hydrocarbon chain with 3-36 C atoms] such as 1,3-dimethylimidazoliumoctyl sulfate. These novel ionic liqs. can

be used as solvents or solvent additives in chemical reactions, as extraction agents or as heat carriers.

IT 445473-58-5P 502421-75-2P 502421-76-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of halogen-free ionic liqs.)

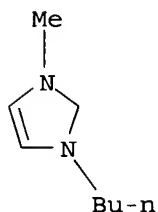
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me⁻ (CH₂)₇-O⁻SO₃⁻

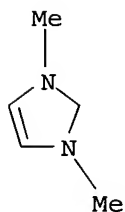
RN 502421-75-2 HCAPLUS

CN 1H-Imidazolium, 1,3-dimethyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

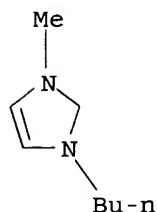
RN 502421-76-3 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me- (CH₂)₁₁-O-SO₃⁻

L27 ANSWER 7 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1052174 HCAPLUS

DOCUMENT NUMBER: 142:431904

TITLE: Hydroformylation of 1-hexene with water-soluble phosphine-rhodium complexes in room temperature ionic liquids

AUTHOR(S): Peng, Qing-rong; Wang, Yu; Deng, Chang-xi; Wang, Xiao-qiang; Yuan, You-zhu

CORPORATE SOURCE: Department of Chemistry, Xiamen University, Xiamen, 361005, Peop. Rep. China

SOURCE: Fenzi Cuihua (2004), 18(5), 376-380

CODEN: FECUEN; ISSN: 1001-3555

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB This paper studied the catalytic performances of water-soluble phosphine-rhodium complexes in room temperature ionic liqs. for 1-hexene hydroformylation. The higher reaction rate and normal aldehyde selectivity were obtained through choosing the proper anionic and cationic groups of the ionic liqs. Moreover, the catalytic activity of TPPTS-rhodium complex could be increased by increasing the solubility of TPPTS in the ionic liqs. like [BMI]BF₄ and also by the addition of small amount of

water into the [BMI]BF₄ ionic liquid. The recycling of the catalysts based on amphiphilic phosphines was achieved in the [BMI]BF₄ ionic liquid without significant loss in the catalytic activity due to the easy phase separation. The exptl. results inferred that the solubility of water-soluble rhodium complexes

was key to obtain the reasonable catalytic activity.

IT 502421-76-3

RL: NUU (Other use, unclassified); USES (Uses)

(hydroformylation of hexene with water-soluble phosphine-rhodium complexes in room temperature ionic liqs.)

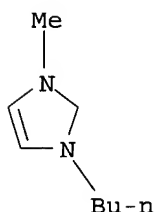
RN 502421-76-3 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me-(CH₂)₁₁-O-SO₃⁻

L27 ANSWER 8 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1030085 HCAPLUS

DOCUMENT NUMBER: 142:411034

TITLE: Exploration of room temperature ionic liquids as new class of solvents for chemical reactions

AUTHOR(S): Aebischer, Jean-Nicolas; Corminboeuf, Gregory; Marti, Roger; Vanoli, Ennio

CORPORATE SOURCE: Departement des technologies industrielles Filieres de chimie, Ecole d'ingenieurs et d'architectes de Fribourg, Fribourg, CH-1705, Switz.

SOURCE: Chimia (2004), 58(10), 753-755
CODEN: CHIMAD; ISSN: 0009-4293

PUBLISHER: Swiss Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: French

AB Ionic liqs. based on lauryl sulfate and tosylate anions were developed and characterized. A Heck reaction (synthesis of Et trans-cinnamate) was optimized in 1-butyl-3-methylimidazolium tosylate ionic liquid. The

recycling of the reaction medium, including the catalyst and the ionic liquid, was carefully studied and the following results were obtained: eleven reactions were performed without further catalyst addns., the average yield was 85% with an average reaction time of 10 h.

IT 502421-76-3P, 1-Butyl-3-methylimidazolium lauryl sulfate

850474-43-0P 850474-44-1P 850474-45-2P

850474-46-3P 850474-47-4P 850474-49-6P

850474-50-9P

RL: NUJ (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation of ionic liqs. as solvents for a room temperature Heck reaction)

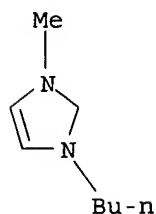
RN 502421-76-3 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me-(CH₂)₁₁-O-SO₃⁻

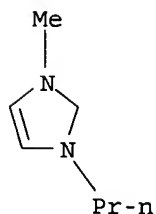
RN 850474-43-0 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 80432-06-0

CMF C7 H13 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

 $\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{SO}_3^-$

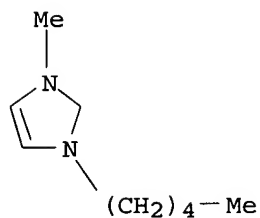
RN 850474-44-1 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 81994-82-3

CMF C9 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

 $\text{Me}-(\text{CH}_2)_{11}-\text{O}-\text{SO}_3^-$

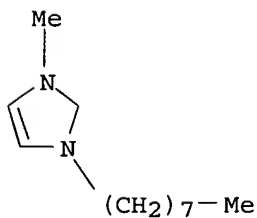
RN 850474-45-2 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 178631-03-3

CMF C12 H23 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

 $\text{Me}^-(\text{CH}_2)_{11}-\text{O}^--\text{SO}_3^-$

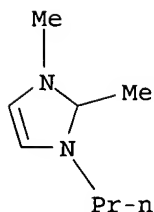
RN 850474-46-3 HCAPLUS

CN 1H-Imidazolium, 1,2-dimethyl-3-propyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 157310-70-8

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

 $\text{Me}^-(\text{CH}_2)_{11}-\text{O}^--\text{SO}_3^-$

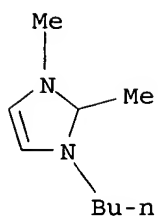
RN 850474-47-4 HCAPLUS

CN 1H-Imidazolium, 1-butyl-2,3-dimethyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 108203-89-0

CMF C9 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me- (CH₂)₁₁-O-SO₃⁻

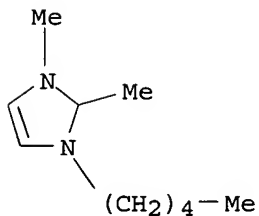
RN 850474-49-6 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 850474-48-5

CMF C10 H19 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me- (CH₂)₁₁-O-SO₃⁻

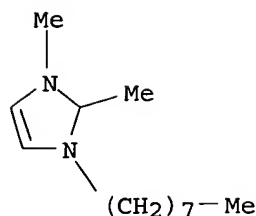
RN 850474-50-9 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 64735-57-5

CMF C13 H25 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me-(CH₂)₁₁-O-SO₃⁻

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:988152 HCAPLUS

DOCUMENT NUMBER: 142:246929

TITLE: Study on thermochemistry of room temperature ionic liquid. 1. Solution enthalpy of EMIES and Pitzer's parameters

AUTHOR(S): Tan, Zhi-Cheng; Zhang, Zhi-Heng; Sun, Li-Xian; Xu, Wei-Guo; Xu, Fen; Yang, Jia-Zhen; Zhang, Tao

CORPORATE SOURCE: Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, 116023, Peop. Rep. China

SOURCE: Huaxue Xuebao (2004), 62(21), 2161-2164

CODEN: HHHPA4; ISSN: 0567-7351

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Using the solution reaction isoperibol calorimeter, the molar solution enthalpies of room temperature ionic liquid, 1-ethyl-3-methylimidazolium Et sulfate (EMIES), with various molalities were determined at T = 303.150 K in water. According to Pitzer's electrolyte solution theory, the molar solution enthalpy of EMES at infinite dilution, ΔsH_{0m}, and Pitzer's parameters: β(0)LMX, β(1)LMX and CΦLMX were obtained. Then the values of apparent relative molar enthalpy ΦL, and relative partial molar enthalpy of solvent and solute (EMIES), .hivin.L.hivin.1 and .hivin.L.hivin.2 were calculated, resp.

IT 342573-75-5, 1-Ethyl-3-methylimidazolium ethyl sulfate

RL: PRP (Properties)

(thermochem. of room temperature ionic liq. and solution enthalpy of EMIES and Pitzer's parameters)

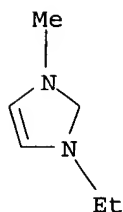
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L27 ANSWER 10 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:965227 HCAPLUS

DOCUMENT NUMBER: 141:395586

TITLE: Method for the production of ionic liquids containing
alkyl sulphate and functionalized alkyl
sulphate-anions

INVENTOR(S): Wasserscheid, Peter; Van Hal, Roy; Hilgers, Claus

PATENT ASSIGNEE(S): Solvent Innovation G.m.b.H., Germany

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

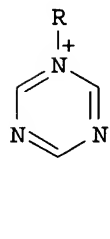
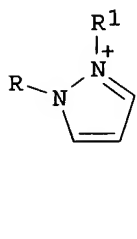
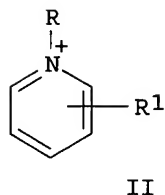
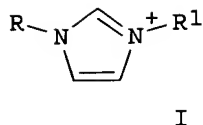
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096776	A1	20041111	WO 2004-EP50619	20040427
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10319465	A1	20041118	DE 2003-10319465	20030429
PRIORITY APPLN. INFO.:			DE 2003-10319465	A 20030429
OTHER SOURCE(S):			CASREACT 141:395586; MARPAT 141:395586	
GI				

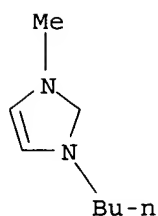


- AB The invention relates to a method for the production of ionic liqs. of general formula [cation][R'O-SO3]-, [cation = +NR1R2R2R, +PR1R2R3R, I, II, III, IV; R' = R4{X(CH2)n}m; n = 1 - 400; X = O, S, Se, bond, OSiMe2O, OSiEt2O, OSi(OMe)2O, OSi(OEt)2O, PPh, PR''; R4 = (un)branched, (un)saturated C1-36-aliphatic, alicyclic (optionally substituted with OH, OR'', CO2H, CO2R'', NH2, SO4, F, Cl, Br, I, CN); R'' = (un)branched C1-12-alkyl; R1, R2, R3 = H, (un)branched, (un)saturated C1-20-aliphatic, alicyclic, heteroaryl, C3-8-heteroaryl-(C1-6-alkyl); R = C1-20-aliphatic, alicyclic, heteroaryl, C3-8-heteroaryl-(C1-6-alkyl), C5-12-aryl-(C1-6-alkyl)]. The method is characterized by alkylation of pyridine, imidazole, phosphane, amine, pyrazole or diazole derivs. with Me2SO4 or Et2SO4, followed by reaction with an alc. (R'OH). Thus, 1-ethyl-3-methylimidazolium 2-(2-methoxyethoxy)ethyl sulfate was prepared in quant. yield from 1-ethylimidazole via alkylation with Me2SO4 followed by transesterification with MeOCH2CH2OCH2CH2OH.
- IT 445473-58-5P, 1-Butyl-3-methylimidazolium 1-octyl sulfate
790663-77-3P, 1-Ethyl-3-methylimidazolium 2-(2-methoxyethoxy)ethyl sulfate
790663-78-4P, 1,3-Dimethylimidazolium 2-methoxyethyl sulfate
790663-79-5P, 1-Ethyl-3-methylimidazolium octyl sulfate
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of ionic liqs. containing alkyl sulfate and functionalized alkyl sulfate-anions)
- RN 445473-58-5 HCAPLUS
- CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2

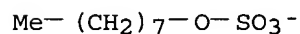


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S



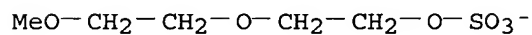
RN 790663-77-3 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

CM 1

CRN 595565-53-0

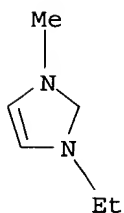
CMF C5 H11 O6 S



CM 2

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

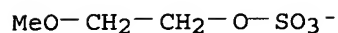
RN 790663-78-4 HCAPLUS

CN 1H-Imidazolium, 1,3-dimethyl-, 2-methoxyethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 597579-98-1

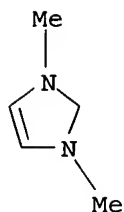
CMF C3 H7 O5 S



CM 2

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

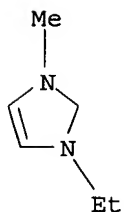
RN 790663-79-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2

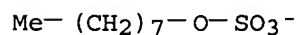


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 11 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:841769 HCAPLUS

DOCUMENT NUMBER: 141:314168
 TITLE: Preparation of 2,2,6,6-tetramethylpiperidin-4-one from
 from acetone and ammonia in the presence of ionic
 liquids.
 INVENTOR(S): Frauenkron, Matthias
 PATENT ASSIGNEE(S): BASF AG, Germany
 SOURCE: Ger. Offen., 9 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10315412	A1	20041014	DE 2003-10315412	20030404

PRIORITY APPLN. INFO.: DE 2003-10315412 20030404

AB 2,2,6,6-Tetramethylpiperidin-4-one (I) was prepared from from acetone or
 acetone condensation products and ammonia in the presence of ionic liqs.
 Thus, acetone and ammonia were autoclaved in 1-butyl-3-methylimidazolium
 octylsulfate at 100° for 6 h to give 23.7% I in 74.1% selectivity.

IT 500214-09-5, 1-Butyl-3-methylimidazolium octylsulfate
 RL: NUU (Other use, unclassified); USES (Uses)
 (preparation of tetramethylpiperidinone from from acetone and ammonia in the
 presence of ionic liqs.)

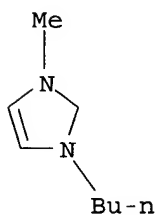
RN 500214-09-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX
 NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2

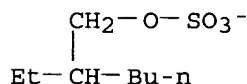


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

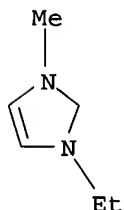
CM 2

CRN 63654-70-6

CMF C8 H17 O4 S



L27 ANSWER 12 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:818967 HCAPLUS
DOCUMENT NUMBER: 142:6005
TITLE: Heterogeneous oxidation of pyrimidine and alkyl
thioethers in ionic liquids over mesoporous Ti or
Ti/Ge catalysts
AUTHOR(S): Cimpeanu, Valentin; Parvulescu, Vasile I.; Amoros,
Pedro; Beltran, Daniel; Thompson, Jillian M.;
Hardacre, Christopher
CORPORATE SOURCE: Institute of Organic Chemistry, Romanian Academy,
Bucharest, 060023, Rom.
SOURCE: Chemistry--A European Journal (2004), 10(18),
4640-4646
CODEN: CEUJED; ISSN: 0947-6539
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Heterogeneous catalytic oxidation of a series of thioethers
(2-thiomethylpyrimidine, 2-thiomethyl-4,6-dimethylpyrimidine,
2-thiobenzylpyrimidine, 2-thiobenzyl-4,6-dimethylpyrimidine, thioanisole,
and n-heptyl Me sulfide) was performed in ionic liqs. by using MCM-41 and
UVM-type mesoporous catalysts containing Ti, or Ti and Ge. A range of
triflate-, tetrafluoroborate-, trifluoroacetate-, lactate-, and
bis(trifluoromethanesulfonyl)imide-based ionic liqs. were used. The
oxidns. were carried out by using anhydrous hydrogen peroxide or the
urea-hydrogen peroxide adduct and showed that ionic liqs. are very
effective solvents, achieving greater reactivity and selectivity than
reactions performed in dioxane. The effects of halide and acid impurities
on the reactions were also investigated. Recycling expts. on catalysts
were carried out in order to evaluate Ti leaching and its effect on
activity and selectivity.
IT 342573-75-5, 1-Ethyl-3-methylimidazolium ethyl sulfate
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of sulfoxides by heterogeneous oxidation of pyrimidine and
alkyl
thioethers in ionic liqs. over mesoporous Ti or
Ti/Ge catalysts)
RN 342573-75-5 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)
CM 1
CRN 65039-03-4
CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8
CMF C2 H5 O4 S

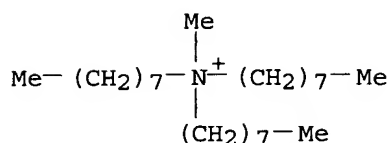
Et-O-SO₃⁻

REFERENCE COUNT: 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:817844 HCAPLUS
DOCUMENT NUMBER: 141:314773
TITLE: Method and apparatus for the separation of monomers from a composition containing a monomer
INVENTOR(S): Hoff, Andreas; Kobus, Axel; Thong, Dennis; Goedecke, Ralf; Roos, Martin; Balduf, Torsten
PATENT ASSIGNEE(S): Stockhausen G.m.b.H. & Co. K.-G., Germany; Degussa A.-G.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004085371	A1	20041007	W0 2004-EP3211	20040326
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10314203	A1	20041021	DE 2003-10314203	20030328
PRIORITY APPLN. INFO.: DE 2003-10314203 A 20030328				
AB (meth)acrylic acid is purified by contacting the impure material with a material having a m.p. ≤150° and vapor pressure ≤1 mbar at 20° such as ionic liqs. and highly branched polymers so that a separation phase is formed and separating the monomer from this separation phase.				
IT 58110-64-8, Methyltrioctylammonium methyl sulfate RL: NUU (Other use, unclassified); USES (Uses) (OMA-MeSO ₄ , ionic liq.; purification of (meth)acrylic acid by contacting with ionic liqs. or highly branched polymers)				
RN	58110-64-8 HCAPLUS			
CN	1-Octanaminium, N-methyl-N,N-dioctyl-, methyl sulfate (9CI) (CA INDEX NAME)			
CM	1			

CRN 22061-11-6
CMF C25 H54 N



CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:806285 HCAPLUS

DOCUMENT NUMBER: 142:324919

TITLE: Studies on electrochemical stability of room temperature ionic liquids

AUTHOR(S): Yang, Jia-Zhen; Jin, Yi; Cao, Ying-Hua; Sun, Li-Xian; Tan, Zhi-Cheng

CORPORATE SOURCE: Dep. Chem., Liaoning Univ., Shenyang, 110036, Peop. Rep. China

SOURCE: Gaodeng Xuexiao Huaxue Xuebao (2004), 25(9), 1733-1735
CODEN: KTHPDM; ISSN: 0251-0790

PUBLISHER: Gaodeng Jiaoyu Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB In this paper 3 air and H₂O-stable room temperature ionic liqs. (RTILs) N-butylpyridinium tetrafluoroborate (BPBF₄), 1-butyl-3-methylimidazolium tetrafluoroborate (BMIBF₄), and 1-ethyl-3-methylimidazolium Et sulfate (EMISE) were synthesized. Their electrochem. windows were measured by cyclic voltammetry at 303.15-343.15 K. The cyclic voltammograms show the order of windows which represent the electrochem. stability of RTIL is: BPBF₄<BMIBF₄<EMISE. When temperature increases the windows reduce, i.e., the stability of RTIL reduces with the increase of temperature The difference among

the windows of the 3 RTILs is mainly dependent on the order of the reductive limits of the cations: EMI⁺|-1.40 V| > BMI⁺|-0.95 V| > BP⁺|0.02 V|. It is very interesting that while the oxidative limit of anion BF₄⁻ and the reductive limit of all the cations reduce with the increase of temperature, but the oxidative limit of anion SE⁻ increases.

IT 342573-75-5, 1-Ethyl-3-methylimidazolium ethyl sulfate

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(electrochem. stability of room temperature ionic liqs. in cyclic voltammetry study)

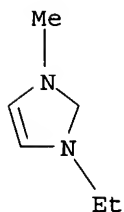
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L27 ANSWER 15 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:768999 HCAPLUS

DOCUMENT NUMBER: 141:410647

TITLE: Heck reactions of aryl halides in phosphonium salt

ionic liquids. Library screening and applications

AUTHOR(S): Gerritsma, David A.; Robertson, Al; McNulty, James;

Capretta, Alfredo

CORPORATE SOURCE: Department of Chemistry, McMaster University,

Hamilton, ON, L8S 4M1, Can.

SOURCE: Tetrahedron Letters (2004), 45(41), 7629-7631

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:410647

AB The Heck cross-coupling of aryl iodides and bromides with olefins proceeds in the phosphonium salt ionic liquid trihexyl(tetradecyl)phosphonium chloride (THP-Cl) in excellent yields. Furthermore, it is shown that the counter anion matched to the phosphonium cation exerts a measurable effect on the overall yield.

IT 69056-62-8

RL: NUU (Other use, unclassified); USES (Uses)

(ionic liq.; Heck reactions of aryl halides with olefins in phosphonium salt ionic liqs.)

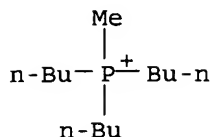
RN 69056-62-8 HCAPLUS

CN Phosphonium, tributylmethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 34217-64-6

CMF C13 H30 P



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 16 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:742043 HCAPLUS

DOCUMENT NUMBER: 142:164495

TITLE: Electrochemical synthesis and characterization of poly(3,4-ethylenedioxythiophene) in ionic liquids with bulky organic anions

AUTHOR(S): Danielsson, Petter; Bobacka, Johan; Ivaska, Ari

CORPORATE SOURCE: Process Chemistry Group, Laboratory of Analytical Chemistry, Abo Akademi University, Abo-Turku, 20500, Finland

SOURCE: Journal of Solid State Electrochemistry (2004), 8(10), 809-817

CODEN: JSSEFS; ISSN: 1432-8488

PUBLISHER: Springer GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The electrochem. of poly(3,4-ethylenedioxythiophene) (PEDOT) was studied in two ionic liqs. with bulky organic anions, i.e., 1-butyl-3-methylimidazolium (BMIM) diethylene glycol monomethyl ether sulfate (MDEGSO₄) and BMIM octyl sulfate (OctSO₄). BMIM-MDEGSO₄ is a liquid, while BMIM-OctSO₄ is in solid form at room temperature. Electrosynthesis of PEDOT in BMIM-MDEGSO₄ with an EDOT concentration of 0.1 M and in BMIM-MDEGSO₄/EDOT 1/1 (weight/weight) solution resulted in no polymer at all or a very limited amount of

polymer on the electrode surface, as determined by cyclic voltammetry in 0.1 M KCl(aq) solution. In contrast, electrosynthesis of PEDOT in BMIM-OctSO₄/EDOT 1/1 (weight/weight) resulted in a high yield of electroactive material on the electrode surface. Furthermore, electrosynthesis of PEDOT in ionic liquid-water solution (Cionic liquid=1.5 M) containing 0.1 M EDOT was also found to

give a relatively high yield of electroactive material on the electrode surface, both for 1.5 M BMIM-MDEGSO₄(aq) and 1.5 M BMIM-OctSO₄(aq). The PEDOT electrodes showed an anionic potentiometric response in 10⁻⁵-10⁻¹ M KCl(aq) solution, indicating a predominant anion transfer at the polymer-solution interface despite the relatively bulky anions (MDEGSO₄- or OctSO₄-) incorporated as counterions in PEDOT during electropolymerization. On

the basis of electrochem. impedance spectroscopy, the charge (ion) transport properties of the polymer film were strongly influenced by the water content of the ionic liquid (Cionic liquid=0.05-2.0 M).

IT 445473-58-5, 1-Butyl-3-methylimidazolium 1-octyl sulfate
595565-54-1

RL: NUU (Other use, unclassified); USES (Uses)
(electrochem. synthesis and characterization of poly(3,4-ethylenedioxythiophene) in ionic liqs. with bulky organic anions)

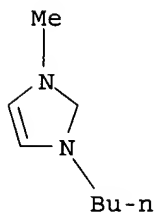
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

RN 595565-54-1 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

CM 1

CRN 595565-53-0

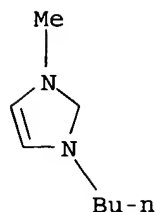
CMF C5 H11 O6 S

MeO-CH₂-CH₂-O-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 17 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:705125 HCAPLUS

DOCUMENT NUMBER: 141:416487

TITLE: Measurement and correlation of vapor-liquid equilibria and excess enthalpies of binary systems containing ionic liquids and hydrocarbons

AUTHOR(S): Kato, Ryo; Krummen, Michael; Gmehling, Jurgen

CORPORATE SOURCE: Carl von Ossietzky Universitat Oldenburg, Oldenburg, D-26111, Germany

SOURCE: Fluid Phase Equilibria (2004), 224(1), 47-54

CODEN: FPEQDT; ISSN: 0378-3812

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Vapor-liquid equilibrium (VLE) and excess enthalpies (HE) have been measured for

the hydrocarbons hexane, 1-hexene, cyclohexane, cyclohexene, benzene and toluene with the ionic liqs. 1-methyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide [MMIM]+ [(CF₃SO₂)₂N]-, 1-ethyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide [EMIM]+ [(CF₃SO₂)₂N]-, 1-butyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide [BMIM]+ [(CF₃SO₂)₂N]-, 1-methyl-3-methyl-imidazolium ethylsulfate [EMIM]+ [C₂H₅OSO₃]- and pyridiniummethoxyethylsulfate [C₅H₅NH]+ [C₂H₅OC₂H₄OSO₃]- at 353.15 K, 303.15 K and 333.15 K, resp. The exptl. VLE and HE data were correlated together with available activity coeffs. at infinite dilution γ_{oi} using the NRTL and UNIQUAC models and the relative van der Waals volume and surface area parameters r and q estimated by the Bondi method. The overall average errors using NRTL and UNIQUAC model are 4.6 % and 4.8 % for VLE, 1.7% and 1.9% for γ_{oi} and 3.6 % and 3.2 % for HE.

IT 342573-75-5, 1-Ethyl-3-methyl-imidazolium ethylsulfate

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)
(VLE and excess enthalpies of binary mixts. containing ionic liqs. and hydrocarbons)

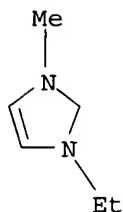
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 18 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:601358 HCAPLUS

DOCUMENT NUMBER: 141:397827

TITLE: Deep desulfurization of oil refinery streams by extraction with ionic liquids

AUTHOR(S): Eber, Jochen; Wasserscheid, Peter; Jess, Andreas

CORPORATE SOURCE: Department of Chemical Engineering, University Bayreuth, Bayreuth, D-95440, Germany

SOURCE: Green Chemistry (2004), 6(7), 316-322

CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Extraction of S- and N-compds. from gasoline and diesel fuel by ionic liqs. (ILs) indicates that such a process could be an alternative to common hydrodesulfurization (HDS) for deep desulfurization down to values of 10 ppm S or even lower. The results show the selective extraction properties of ILs, especially with regard to those S-compds. which are hard to remove by HDS, e.g. dibenzothiophene derivs. present in middle distillates like diesel oil. The application of mild process conditions (ambient pressure and temperature) and the fact that no hydrogen is needed, are addnl. advantages compared to HDS. Very promising ILs are [BMIM][OCSO₄] and [EMIM][EtSO₄], as they are halogen-free and available from relatively cheap starting materials. Extraction with ILs is not limited to diesel oil, but probably even more attractive for FCC gasoline. Although HDS of S-species present in this gasoline constituent - mainly thiophenes - is relatively straightforward, a major drawback is the loss in octane number by olefin saturation, which favors extraction with ILs.

IT 342573-75-5 445473-58-5

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(deep desulfurization of oil refinery streams by extn. with ionic liqs.)

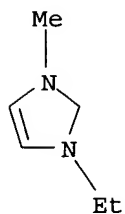
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

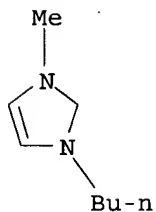
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me-(CH₂)₇-O-SO₃⁻

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:517349 HCAPLUS

DOCUMENT NUMBER: 142:256603

TITLE: Effects of ionic liquids on the acetylcholinesterase -
a structure-activity relationship considerationAUTHOR(S): Stock, F.; Hoffmann, J.; Ranke, J.; Stoermann, R.;
Ondruschka, B.; Jastorff, B.CORPORATE SOURCE: UFT Center for Environmental Research and
Environmental Technology, Bremen, Germany

SOURCE: Green Chemistry (2004), 6(6), 286-290

CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Ionic liqs. are discussed as sustainable green solvents, but toxicity and ecotoxicity data are rare. In this paper we present our results for different ionic liqs. with the acetylcholinesterase inhibition assay. The results show that the acetylcholinesterase can be inhibited by ionic liqs. containing a cation with a pos. charged nitrogen and a certain lipophilicity. We tested imidazolium ionic liqs. with different alkyl chains at R1 and R2 as well as with different anions and compared these results with our findings for other cation structures such as pyridinium ionic liqs. and phosphonium ionic liqs. According to our results imidazolium and pyridinium ionic liqs. inhibit the purified enzyme with EC50 values as low as 13 μ M. The bulky phosphonium ionic liqs. were less inhibitory. These results can be rationalized by structure-activity relationship considerations.

IT 445473-58-5 595565-54-1

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(effects of ionic liqs. on acetylcholinesterase and
structure-activity relationship)

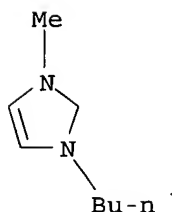
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

 $\text{Me}-(\text{CH}_2)_7-\text{O}-\text{SO}_3^-$

RN 595565-54-1 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

CM 1

CRN 595565-53-0

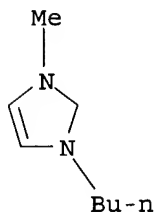
CMF C5 H11 O6 S

 $\text{MeO}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{SO}_3^-$

CM 2

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 20 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:347904 HCAPLUS

DOCUMENT NUMBER: 142:155520

TITLE: Metathesis in ionic liquids

AUTHOR(S): Ranwell, Alta; Dwyer, Catherine Lynn; Ajam, Mirian

CORPORATE SOURCE: UK

SOURCE: IP.com Journal (2004), 4(2), 4 (No. IPCOM000021227D),
6 Jan 2004

CODEN: IJPOBX; ISSN: 1533-0001

PUBLISHER: IP.com, Inc.

DOCUMENT TYPE: Journal; Patent

LANGUAGE: English

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IP 21227D		20040106		
PRIORITY APPLN. INFO.:		IP 2004-21227D	20040106	
AB The yield and selectivity in olefin metathesis reactions in presence of a				

ruthenium catalyst are improved by using an ionic liquid as the solvent. Thus, the metathesis of 1-octene in the presence of Grubb's catalyst in 1-ethyl-2,3-dimethylimidazolium bis(trifluoromethylsulfonyl)imide gave 1-tetradecene with 97% selectivity.

IT 445473-58-5 817574-90-6

RL: NUU (Other use, unclassified); USES (Uses)

(selectivity in olefin metathesis reactions over a ruthenium catalyst in ionic liq. solvent)

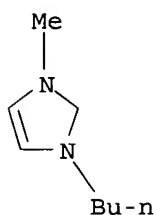
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me-(CH₂)₇-O-SO₃⁻

RN 817574-90-6 HCAPLUS

CN 1H-Imidazolium, 1-butyl-2,3-dimethyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 595565-53-0

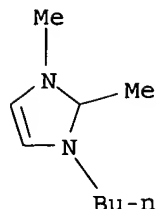
CMF C5 H11 O6 S

MeO-CH₂-CH₂-O-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 108203-89-0

CMF C9 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

L27 ANSWER 21 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:328916 HCAPLUS

DOCUMENT NUMBER: 140:344544

TITLE: Odorant composition ing ionic liquids as fixatives

PATENT ASSIGNEE(S): Creavis Gesellschaft fuer Technologie und Innovation
m.b.H., Germany

SOURCE: Ger. Offen., 13 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10337579	A1	20040422	DE 2003-10337579	20030816
WO 2004035018	A2	20040429	WO 2003-EP11110	20031008
WO 2004035018	A3	20040715		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2002-10247514 IA 20021011
DE 2003-10337579 A 20030816

OTHER SOURCE(S): MARPAT 140:344544

AB The invention concerns odorant compns. that contain ionic liqs. as fixatives; preferred cationic liqs. are salts of imidazolium, pyridinium, ammonium or phosphonium ions; anionic liqs. are selected from the group of phosphates, alkylphosphates, nitrates, sulfates, alkylsulfates, arylsulfates, sulfonates, alkylsulfonates, arylsulfonates, alkyl borates, tosylates, saccharinates and alkylcarboxylates. Ethanol is used as solvent; addnl. fixatives are added. Perfumes, body care cosmetics, washing powder and softener odorants, or odorants for masking industrial odors can be prepared Thus a composition contained (weight parts); bergamot

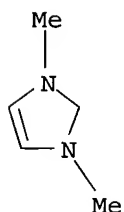
oil

300; oakmoss absolute 80; ylang-ylang 60; jasmin absolute 15; carnation absolute 15;
dianthine 20; Iralia 50; Irrozol 60; propylphenyl acetaldehyde 35;
vanillin 15; vetiver oil 70; opoponax 50; heliotropin 100; sandalwood oil 20; patchouli oil 40; dihydrocoumarin 30; cyclopentadecanolide 5;
1,3-dimethyl-imidazoliummethyl sulfate 35.

IT 97345-90-9, 1,3-Dimethyl-imidazoliummethyl sulfate
401788-98-5, 1-Butyl-3-methyl-imidazolium methyl sulfate
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
(odorant composition ing **ionic liqs.** as fixatives)
RN 97345-90-9 HCAPLUS
CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4
CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

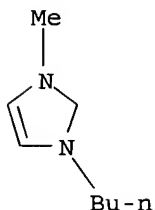
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 401788-98-5 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 22 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:328870 HCAPLUS
 DOCUMENT NUMBER: 140:357341
 TITLE: Procedures for the production of new, functionalized ionic liquids
 INVENTOR(S): Wasserscheid, Peter; Driessen-Hoelscher, Birgit; Steffens, Christian; Hilgers, Claus
 PATENT ASSIGNEE(S): Solvent Innovation G.m.b.H., Germany
 SOURCE: Ger. Offen., 15 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

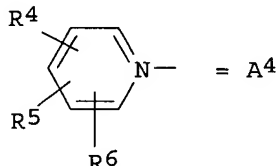
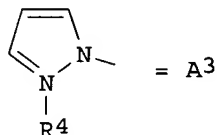
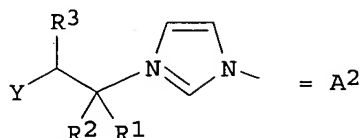
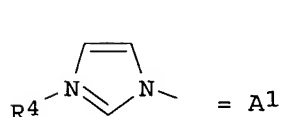
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10247578	A1	20040422	DE 2002-10247578	20021013
WO 2004035542	A1	20040429	WO 2003-EP11306	20031013

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: DE 2002-10247578 A 20021013

OTHER SOURCE(S): CASREACT 140:357341; MARPAT 140:357341
 GI



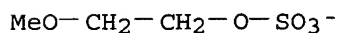
AB This invention refers to new ionic liqs., [R1R2C(A)CH(Y)R3]+X- [I; A =

NR4R5R6, R3CH(Y)CR1R2NR4R5, PR4R5R6, R3CH(Y)CR1R2PR4R5, A1, A2, A3, A4; X- = PF6-, BF4-, CF3CO2-, CF3SO3-, (CF3SO2)2N-, (CF3SO2)(CF3CO)N-, R7SO3, R7OSO3-, R7CO2-, Cl-, Br-, I-, NO3-, CN-, HSO4-, R7R8PO4-; R1 - R7 = H, (un)branched, (un)saturated C1-20-alkyl, C1-20-cycloalkyl, heteroaryl, heteroaryl-(C1-6-alkyl) (3-8 carbons in heterocycle also containing O, N and/or S); aryl, aryl(C1-6-alkyl) (with 5 -12 carbons in the aryl residue); Y = COR9, CO2R9, OC(:O)R9, OR9, CONH2, CN, CONHR9, CONR9R10, NHR9, NR9R10; R9, R10 = H, (un)branched, (un)saturated C1-20-alkyl, C1-20-cycloalkyl, heteroaryl-(C1-6-alkyl) (3-8 carbons in heterocycle also containing O, N and/or S), aryl, aryl(C1-6-alkyl) (with 5 -12 carbons in the aryl residue), etc.], with functionalized N-alkyl and P-alkyl groups as well as to a new procedure for its production in a very efficient and economical way. The invention also refers to the preparation of I via reaction of acrylic compds., R1R2C:C(Y)R3, with amines, phosphanes, imidazoles, pyrazoles or pyridines in the presence of an acid. Thus, 1-(2-cyanoethyl)-3-butylimidazolium tetrafluoroborate was prepared from 1-butylimidazolium tetrafluoroborate via reaction with acrylonitrile in the presence of pyridine and hydroquinone. These new ionic liqs. can e.g. as solvents and/or solvent addns. in chemical reactions, when extractant or as heat distribution media are used.

IT 681164-11-4P, 1-(2-Cyanoethyl)pyridinium methoxyethyl sulfate
681164-14-7P, 1-[2-(Ethoxycarbonyl)ethyl]pyridinium methoxyethyl sulfate
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of new functionalized ionic liqs.)
RN 681164-11-4 HCAPLUS
CN Pyridinium, 1-(2-cyanoethyl)-, 2-methoxyethyl sulfate (9CI) (CA INDEX NAME)

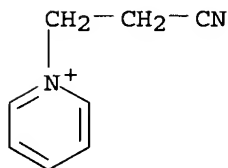
CM 1

CRN 597579-98-1
CMF C3 H7 O5 S



CM 2

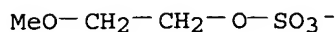
CRN 112485-78-6
CMF C8 H9 N2



RN 681164-14-7 HCAPLUS
CN Pyridinium, 1-(3-ethoxy-3-oxopropyl)-, compd. with 2-methoxyethyl hydrogen sulfate (1:1) (9CI) (CA INDEX NAME)

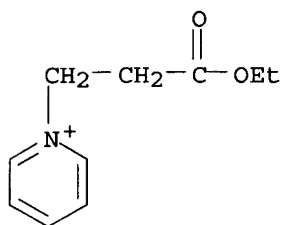
CM 1

CRN 597579-98-1
CMF C3 H7 O5 S



CM 2

CRN 46230-40-4
CMF C10 H14 N O2

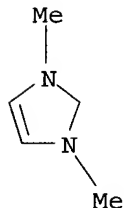


L27 ANSWER 23 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:303437 HCAPLUS
 DOCUMENT NUMBER: 141:376205
 TITLE: Mandelate racemase activity in ionic liquids: scopes and limitations
 AUTHOR(S): Kaftzik, Nicole; Kroutil, Wolfgang; Faber, Kurt; Kragl, Udo
 CORPORATE SOURCE: Department of Chemistry, Rostock University, Albert-Einstein-Strasse 3a, Rostock, 18059, Germany
 SOURCE: Journal of Molecular Catalysis A: Chemical (2004), 214(1), 107-112
 CODEN: JMCCF2; ISSN: 1381-1169
 PUBLISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Ionic liqs. (IL) offer new possibilities for solvent engineering for biocatalytic reactions. The deracemization of (±)-mandelic acid using a lipase-mandelate racemase two-enzyme system was used to investigate the scopes and limitations of ionic liqs. as new reaction media for a dynamic resolution approach. Mandelate racemase [EC 5.1.2.2] from *Pseudomonas putida* ATCC 12633 was observed to be active in ionic liqs. such as 1,3-dimethylimidazolium methylsulfate ([MMIM][MeSO4]) or 1-butyl-3-methylimidazolium octylsulfate ([BMIM][OctSO4]) at water activities $a_w > 0.74$. Mandelate racemase activity could also be obtained in a biphasic system consisting of water and 1-octyl-3-methylimidazolium hexafluorophosphate ([OMIM][PF6]) in a ratio of 1:10.
 IT 97345-90-9, 1,3-Dimethylimidazolium methylsulfate
 500214-09-5, 1-Butyl-3-methylimidazolium octylsulfate
 RL: BUU (Biological use, unclassified); NUU (Other use, unclassified);
 BIOL (Biological study); USES (Uses)
 (mandelate racemase activity in ionic liqs.)
 RN 97345-90-9 HCAPLUS
 CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2

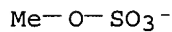


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S



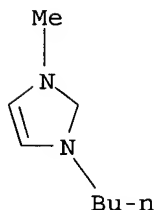
RN 500214-09-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2

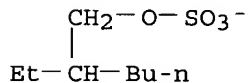


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 63654-70-6

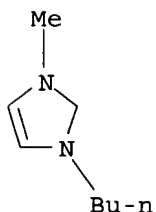
CMF C8 H17 O4 S



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

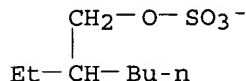
L27 ANSWER 24 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:246999 HCAPLUS
DOCUMENT NUMBER: 140:270553
TITLE: Preparation of aldehydes in ionic liquid solvents
INVENTOR(S): Bohnen, Hans; Herwig, Juergen; Hoff, Dietmar; Van Hal, Roy; Wasserscheid, Peter
PATENT ASSIGNEE(S): Celanese Chemicals Europe G.m.b.H., Germany
SOURCE: Eur. Pat. Appl., 22 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1400504	A1	20040324	EP 2003-20385	20030910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10243446	A1	20040401	DE 2002-10243446	20020919
US 2005085671	A1	20050421	US 2003-654494	20030903
PRIORITY APPLN. INFO.:			DE 2002-10243446	A 20020919
OTHER SOURCE(S): CASREACT 140:270553; MARPAT 140:270553				
AB Aldehydes are prepared by hydroformylation of olefinically unsatd. compds. in presence of a rhodium compound and a sulfonated arylphosphine in an ionic liquid which is a quaternary ammonium sulfonate or sulfate. Thus, 1-octene is treated with synthesis gas in presence of Rh(acac)(CO) ₂ and 4,5-bis(diphenylphosphino)-9,9-dimethylxanthene-2,7-disulfonic acid disodium salt in 1-butyl-3-ethylimidazolium tosylate. The conversion was 56% with a n/iso ratio of 33:1 and a turn-over frequency of 270 h ⁻¹ .				
IT 500214-09-5, 1-Butyl-3-methylimidazolium octyl sulfate				
RL: NUU (Other use, unclassified); USES (Uses) (preparation of aldehydes in ionic liq. solvents)				
RN 500214-09-5 HCAPLUS				
CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX NAME)				
CM 1				
CRN 80432-08-2				
CMF C8 H15 N2				



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 63654-70-6
CMF C8 H17 O4 S

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 25 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:178945 HCAPLUS

DOCUMENT NUMBER: 140:263196

TITLE: Quantification of Halide in Ionic Liquids Using Ion Chromatography

AUTHOR(S): Villagran, Constanza; Deetlefs, Maggel; Pitner, William R.; Hardacre, Christopher

CORPORATE SOURCE: The QUILL Centre and The School of Chemistry, Queen's University Belfast, Belfast, BT9 5AG, UK

SOURCE: Analytical Chemistry (2004), 76(7), 2118-2123

CODEN: ANCHAM; ISSN: 0003-2700

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The determination of chloride impurities in ionic liqs. using ion chromatog. is described. A wide range of cation-anion combinations may be analyzed using ion chromatog., including H2O-immiscible ionic liqs. For all ionic liqs. studied, the limit of quantification for chloride is <8 ppm.

IT 342573-75-5, 1-Ethyl-3-methylimidazolium ethyl sulfate

RL: AMX (Analytical matrix); ANST (Analytical study)
(quantification of halide in ionic liqs. using ion chromatog.)

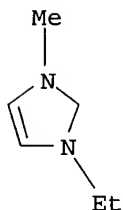
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

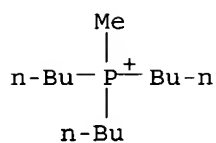
CRN 48028-76-8
CMF C2 H5 O4 S

Et-O-SO₃⁻

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 26 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:162703 HCAPLUS
DOCUMENT NUMBER: 140:199465
TITLE: Preparation of phosphonium and imidazolium salts and use their as polar solvent
INVENTOR(S): Zhou, Yuehui; Robertson, Allan J.; Hillhouse, John H.; Baumann, Douglas
PATENT ASSIGNEE(S): Cytec Canada Inc., Can.
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

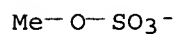
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004016631	A1	20040226	WO 2003-CA1189	20030808
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2398682	AA	20040216	CA 2002-2398682	20020816
PRIORITY APPLN. INFO.:			CA 2002-2398682	A 20020816
OTHER SOURCE(S): CASREACT 140:199465; MARPAT 140:199465				
AB Novel phosphonium and imidazolium salts and methods for preparing them are disclosed. The novel phosphonium and imidazolium compds. are useful as polar solvents. Thus, reaction of di-Me sulfate with Bu ₃ P at 150° for 8 h gave 100% tributylmethylphosphonium methylsulfate.				
IT 69056-62-8P 654057-98-4P 654057-99-5P 663199-27-7P RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses) (preparation of phosphonium and imidazolium salts and their use as polar solvent)				
RN 69056-62-8 HCAPLUS				
CN Phosphonium, tributylmethyl-, methyl sulfate (9CI) (CA INDEX NAME)				
CM 1				
CRN 34217-64-6				
CMF C13 H30 P				



CM 2

CRN 21228-90-0

CMF C H3 O4 S



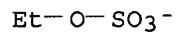
RN 654057-98-4 HCAPLUS

CN Phosphonium, tributylethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 48028-76-8

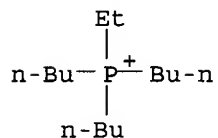
CMF C2 H5 O4 S



CM 2

CRN 45154-70-9

CMF C14 H32 P



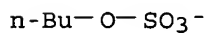
RN 654057-99-5 HCAPLUS

CN Phosphonium, tetrabutyl-, butyl sulfate (9CI) (CA INDEX NAME)

CM 1

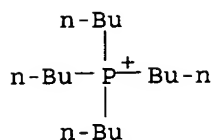
CRN 44826-81-5

CMF C4 H9 O4 S



CM 2

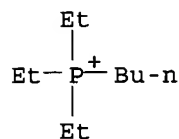
CRN 15853-37-9
CMF C16 H36 P



RN 663199-27-7 HCAPLUS
CN Phosphonium, butyltriethyl-, butyl sulfate (9CI) (CA INDEX NAME)

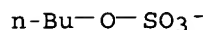
CM 1

CRN 97555-02-7
CMF C10 H24 P



CM 2

CRN 44826-81-5
CMF C4 H9 O4 S



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 27 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:55444 HCAPLUS
DOCUMENT NUMBER: 140:112158
TITLE: Production of organopolysiloxanes using ionic liquids
INVENTOR(S): Hell, Kerstin; Hesse, Ute; Weyershausen, Bernd
PATENT ASSIGNEE(S): Goldschmidt AG, Germany
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1382630	A1	20040121	EP 2003-15132	20030704
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10232305	A1	20040205	DE 2002-10232305	20020717

US 2004014925 A1 20040122 US 2003-619395 20030715
 PRIORITY APPLN. INFO.: DE 2002-10232305 A 20020717
 OTHER SOURCE(S): MARPAT 140:112158

AB In the title process, which enables the recycling of catalysts, hydrosilylation is carried out in the presence of transition metal catalysts and ionic liqs., and these liqs., containing the dissolved catalyst, are separated and recycled after reaction is complete. Stirring 0.02 equivalent

Me₂Si(OH)₂-MeSiH(OH)₂ copolymer, 14.6 g (26 mmol) unsatd. polypropylene glycol, and 1.6 mg H₂PtCl₆ in 0.5 g 1,2,3-trimethylimidazolium methosulfate at 90° for 3 h, cooling, and separating the catalyst phase gave a yellowish, H₂O-clear polysiloxane.

IT 65086-12-6

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (production of organopolysiloxanes using ionic liqs.)

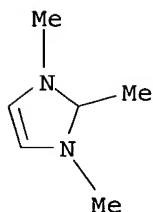
RN 65086-12-6 HCAPLUS

CN 1H-Imidazolium, 1,2,3-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65086-10-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 28 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:41552 HCAPLUS

DOCUMENT NUMBER: 140:112198

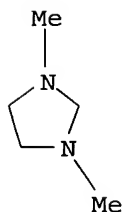
TITLE: Polymeric compositions containing ionic liquids as plasticizers

INVENTOR(S): Schmidt, Friedrich Georg; Petrat, Frank-Martin; Pawlik, Andreas; Haeger, Harald; Weyershausen, Bernd
 PATENT ASSIGNEE(S): Creavis Gesellschaft fuer Technologie und Innovation m.b.H., Germany

SOURCE: PCT Int. Appl., 35 pp.

DOCUMENT TYPE: CODEN: PIXXD2
 LANGUAGE: Patent
 German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004005391	A1	20040115	WO 2003-EP6245	20030613
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10243181	A1	20040122	DE 2002-10243181	20020918
CA 2491587	AA	20040115	CA 2003-2491587	20030613
EP 1519988	A1	20050406	EP 2003-740243	20030613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			DE 2002-10230572	A 20020705
			DE 2002-10243181	A 20020918
			WO 2003-EP6245	W 20030613
AB	The title compns., useful as hot-melt adhesives, binders, fillers, packaging materials, compatibilizers for polymer blends or as molding materials, contain a thermoplastic polymer which is crystalline and without ionic groups, and ≥ 1 salt comprising organic cation of specified structure and a halogen-free anion as plasticizer. For example, adding 15% 1-ethyl-3-methylimidazolinium tosylate to copolyamide-based hot-melt adhesive (Vestamelt VM 430-P2) lowered the m.p. and the glass temperature of the adhesive and increased its melting enthalpy.			
IT	646072-58-4 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (plasticizer; thermoplastic polymer compns. containing ionic liqs. as plasticizers)			
RN	646072-58-4 HCAPLUS			
CN	1H-Imidazolium, 4,5-dihydro-1,3-dimethyl-, octyl sulfate (9CI) (CA INDEX NAME)			
CM	1			
CRN	45470-31-3			
CMF	C5 H11 N2			



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3
CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 29 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:37953 HCAPLUS

DOCUMENT NUMBER: 141:331615

TITLE: Ligandless Stille cross-coupling in ionic liquids

AUTHOR(S): Chiappe, Cinzia; Imperato, Giovanni; Napolitano, Elio;
Pieraccini, Daniela

CORPORATE SOURCE: Dipartimento di Bioorganica e Biofarmacia, Pisa, Italy

SOURCE: Green Chemistry (2004), 6(1), 33-36

CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:331615

AB The Stille cross-coupling reaction has been investigated in ten different
ILs to evaluate how the different physico-chemical properties of the medium
can affect the transfer of vinyl and alkyl groups, as well as the
efficiency of the extraction processes. The possibility of working in the
absence of ligand has been also evaluated.

IT 769927-43-7

RL: NUU (Other use, unclassified); USES (Uses)

(ionic liq.; palladium-catalyzed Stille
cross-coupling of vinyl and alkyl compds. in ionic
liqs. in presence and absence of ligands)

RN 769927-43-7 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, heptyl sulfate (9CI) (CA INDEX NAME)

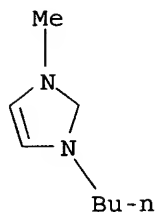
CM 1

CRN 84833-82-9
CMF C7 H15 O4 S

Me- (CH₂)₆-O-SO₃⁻

CM 2

CRN 80432-08-2
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE
 REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 30 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:943987 HCAPLUS

DOCUMENT NUMBER: 140:183566

TITLE: Nanofiltration for the separation of nonvolatile products from solutions containing ionic liquids

AUTHOR(S): Kroeckel, Jan; Kragl, Udo

CORPORATE SOURCE: Universitaet Rostock, Analytische, Technische und Umweltchemie, Rostock, D-18059, Germany

SOURCE: Chemical Engineering & Technology (2003), 26(11), 1166-1168

CODEN: CETEER; ISSN: 0930-7516

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Nanofiltration (NF) can be used to isolate nonvolatile compds. from solns. containing ionic liqs. (IL) (e.g., 1-butyl-3-methylimidazolium tetrafluoroborate, and 1-butyl-3-methylimidazolium methylsulfate). This was shown for the mixts. bromophenol blue/IL and lactose/IL. In both cases the product was rejected while the ionic liquid permeated. Alternatively, the rejection of the ionic liquid is possible as well. Such sepns. are possible because nanofiltration membranes are selective towards size and charge of the components.

IT 401788-98-5, 1-Butyl-3-methylimidazolium methylsulfate

RL: REM (Removal or disposal); PROC (Process)

(ionic liqs; nanofiltration for separation of nonvolatile products from solns. containing ionic liqs .)

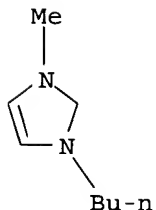
RN 401788-98-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me⁻ O⁻ SO₃⁻

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 31 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:830889 HCAPLUS

DOCUMENT NUMBER: 140:320100

TITLE: Enzymatic condensation reactions in ionic liquids

AUTHOR(S): Kaftzik, Nicole; Neumann, Sebastian; Kula,
Maria-Regina; Kragl, Udo

CORPORATE SOURCE: Department of Chemistry, Rostock University, Rostock,
18051, Germany

SOURCE: ACS Symposium Series (2003), 856(Ionic Liquids as
Green Solvents), 206-211

CODEN: ACSMC8; ISSN: 0097-6156

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In an aqueous environment glycosidases and peptide amidases usually hydrolyze glycosidic bonds or amides, resp. The reaction can be reversed by incubating the enzyme at lower water activity in the presence of ionic liqs., resulting in a higher yield of disaccharide or peptide amide. β -Galactosidase from *Bacillus circulans* can be applied in nearly anhydrous ionic liqs. for reverse hydrolysis with yields of lactose of up to 17%. Peptide amidase from *Stenotrophomonas maltophilia* is used for the direct C-terminal peptide amidation of H-Ala-Phe-OH.

IT 7588-22-9 97345-90-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(enzymic condensation reactions in ionic liqs.)

RN 7588-22-9 HCAPLUS

CN Ethanaminium, N,N-diethyl-N-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

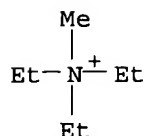
CM 1

CRN 21228-90-0
CMF C H3 O4 S

Me⁻ O⁻ SO₃⁻

CM 2

CRN 302-57-8
CMF C7 H18 N



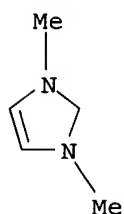
RN 97345-90-9 HCAPLUS

CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2

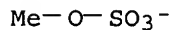


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 32 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:830877 HCAPLUS

DOCUMENT NUMBER: 140:113153

TITLE: New ionic liquids based on alkylsulfate and alkyl oligoether sulfate anions: Synthesis and applications
 AUTHOR(S): Wasserscheid, Peter; van Hal, Roy; Boesmann, Andreas; Esser, Jochen; Jess, Andreas

CORPORATE SOURCE: Institut fuer Technische Chemie und Makromolekulare Chemie, University of Technology at Aachen, Aachen, D-52074, Germany

SOURCE: ACS Symposium Series (2003), 856(Ionic Liquids as Green Solvents), 57-69

CODEN: ACSMC8; ISSN: 0097-6156

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The synthesis, properties, and applications of several alkylsulfate and alkyloligoethersulfate ionic liqs. are discussed. The properties of the ionic liqs., e.g., m.p., hydrolytic stability, and

viscosity are discussed in detail. Testing of 1-butyl-3-methylimidazolium octylsulfate as catalyst layer in the Rh-catalyzed hydroformylation of 1-octene is also discussed.

IT 500214-09-5, 1-Butyl-3-methylimidazolium octylsulfate

RL: CAT (Catalyst use); USES (Uses)

(preparation and properties of ionic liqs. based on alkylsulfates and alkyloligoether sulfates and use in hydroformylation catalyst system)

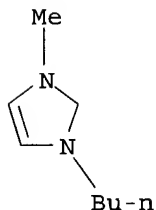
RN 500214-09-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2

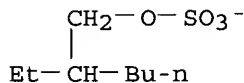


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 63654-70-6

CMF C8 H17 O4 S



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 33 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:719456 HCAPLUS

DOCUMENT NUMBER: 139:230780

TITLE: Preparation and use of halogen-free ionic liquids

INVENTOR(S): Wasserscheid, Peter; Boesmann, Andreas; Van Hal, Roy

PATENT ASSIGNEE(S): Solvent Innovation GmbH, Germany

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2003074494 A1 20030912 WO 2003-EP2127 20030228
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
DE 10208822 A1 20030911 DE 2002-10208822 20020301
CA 2477719 AA 20030912 CA 2003-2477719 20030228
EP 1480956 A1 20041201 EP 2003-711911 20030228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
US 2005070717 A1 20050331 US 2004-930674 20040831
PRIORITY APPLN. INFO.: DE 2002-10208822 A 20020301
WO 2003-EP2127 W 20030228

OTHER SOURCE(S): MARPAT 139:230780

AB The invention relates to ionic liqs. comprising a compound of general formula [cation] [ROSO₃] or [cation] [RSO₃] [R = R₁[X(CH₂)_n]_m; n = 1-12; m = 1-400; X = O, S, OSiMe₂O, OSiEt₂O, OSi(OMe)₂O, OSi(OEt)₂O; R₁ = (un)substituted aliphatic, alicyclic; cation = (un)substituted ammonium, phosphonium, imidazolium, pyridinium, pyrazolium, triazinium] or mixts. of both compds. These ionic liqs. are used as solvents, solvent additives, extracting agents or phase transfer catalysts, or as heat carriers or heat carrier additives in heat exchanger devices. Thus, Me(OCH₂CH₂)₂OH was treated with pyridine-SO₃ complex to give pyridinium Me(OCH₂CH₂)₂OSO₃ which was treated with 1-butyl-3-methylimidazolium chloride to give 1-butyl-3-methylimidazolium [Me(OCH₂CH₂)₂OSO₃]. This compound was used as the solvent in the hydroformylation of 1-octene to give >95% aldehydes with a 1-octene conversion of 46.8%.

IT 401788-98-5 516474-01-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)

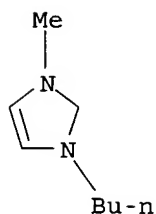
RN 401788-98-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

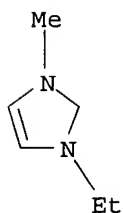
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 516474-01-4 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4
CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

IT **595565-54-1P 595565-55-2P**
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); SPN
(Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and use of halogen-free ionic liqs.)
RN 595565-54-1 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

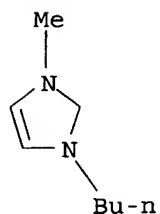
CM 1

CRN 595565-53-0
CMF C5 H11 O6 S

MeO-CH₂-CH₂-O-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 80432-08-2
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

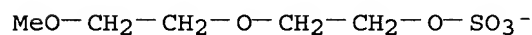
RN 595565-55-2 HCAPLUS

CN 1H-Imidazolium, 1-methyl-3-octyl-, 2-(2-methoxyethoxy)ethyl sulfate (9CI)
(CA INDEX NAME)

CM 1

CRN 595565-53-0

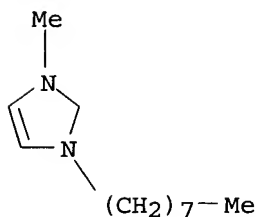
CMF C5 H11 O6 S



CM 2

CRN 178631-03-3

CMF C12 H23 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

IT 445473-58-5

RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(viscosity of)

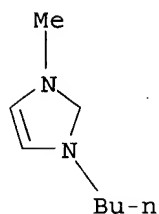
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3
CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 34 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:684180 HCAPLUS

DOCUMENT NUMBER: 140:78757

TITLE: New, halogen-free ionic liquids - synthesis, properties, and applications

AUTHOR(S): Wasserscheid, Peter; van Hal, Roy; Boesmann, Andreas

CORPORATE SOURCE: Institut fuer Technische Chemie und Makromolekulare Chemie der RWTH Aachen, Aachen, D-52074, Germany

SOURCE: Proceedings - Electrochemical Society (2002), 2002-19(Molten Salts XIII), 146-154
CODEN: PESODO; ISSN: 0161-6374

PUBLISHER: Electrochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:78757

AB Typical ionic liqs. consist of halogen containing anions such as [AlCl₄]-, [PF₆]-, [BF₄]-, [CF₃SO₃]- or [(CF₃SO₂)₂N]-. However for many tech. applications the presence of halogen atoms in the ionic liquid's anion may cause serious concerns if the hydrolysis stability of the anion is poor (e. g. for chloroaluminate and hexafluorophosphate systems) or if a thermal treatment of the spent ionic liquid is desired. In both cases addnl. effort is needed to avoid the liberation of toxic and highly corrosive HF or HCl into the environment. In our contribution, we present synthesis, properties and application of several new alkylsulfate and arylsulfonate ionic liqs. The described systems are characterized by their easy synthesis from tech. available raw materials. Some candidates combine low m.ps. with high hydrolysis stability and acceptable viscosity.

IT 500214-09-5P, 1-Butyl-3-methylimidazolium octylsulfate

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and application of new, halogen-free ionic liqs.)

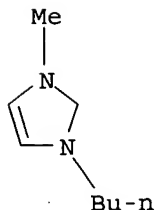
RN 500214-09-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2

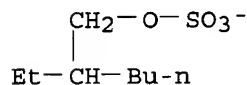


ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 63654-70-6

CMF C8 H17 O4 S



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 35 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:576305 HCAPLUS

DOCUMENT NUMBER: 139:135202

TITLE: Nanofiltration for work-up of low-volatility product from solutions with ionic liquids

AUTHOR(S): Kroeckel, Jan; Kragl, Udo

CORPORATE SOURCE: Analytische, Technische und Umweltchemie, Universitaet Rostock, Rostock, D-18059, Germany

SOURCE: Chemie Ingenieur Technik (2003), 75(7), 959-961

CODEN: CITEAH; ISSN: 0009-286X

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The principal possibility of work-up of reaction mixts. containing ionic liqs. by nanofiltration is proven by expts. using substituted imidazolium salts as the ionic liquid. Ionic liqs. are increasingly used as reaction medium and nanofiltration may be the method of choice for the separation of compds. which cannot be removed by distillation because of their low volatility.

Proper choice of the membrane enables both retention of the target compound or of the ionic liquid

IT 401788-98-5P

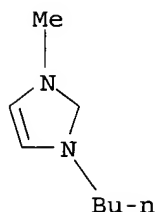
RL: NUU (Other use, unclassified); PUR (Purification or recovery); PREP (Preparation); USES (Uses)

(ionic liq.; nanofiltration for work-up of low-volatility product from solns. with ionic liqs.)

RN 401788-98-5 HCAPLUS
 CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2
 CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
 CMF C H3 O4 S

Me⁻ O⁻ SO₃⁻

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 36 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:564812 HCAPLUS

DOCUMENT NUMBER: 140:16684

TITLE: New, functionalized ionic liquids from Michael-type reactions - a chance for combinatorial ionic liquid development

AUTHOR(S): Wasserscheid, Peter; Driessen-Hoelscher, Birgit; van Hal, Roy; Steffens, H. Christian; Zimmermann, Joerg

CORPORATE SOURCE: Institut fuer Technische Chemie und Makromolekulare Chemie, RWTH Aachen, Aachen, 52074, Germany

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2003), (16), 2038-2039

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:16684

AB The authors describe for the first time an alternative and far more efficient method to synthesize functionalized ionic liqs. in a simple, straightforward, two-step synthesis. E.g, addition of N-methylimidazole to p-toluenesulfonic acid monohydrate, followed by addition of Me vinyl ketone, gave the ionic liquid 1-methyl-3-(3-oxobutyl)imidazolium 4-toluenesulfonate.

IT 630393-18-9P 630393-21-4P 630393-22-5P
 630393-30-5P

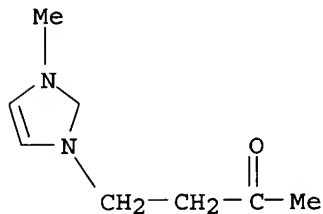
RL: SPN (Synthetic preparation); PREP (Preparation)
 (combinatorial preparation of functionalized ionic liqs.

via Michael-type reaction of protonated amines with
 α,β -unsatd. compds.)

RN 630393-18-9 HCAPLUS
 CN 1H-Imidazolium, 1-methyl-3-(3-oxobutyl)-, 2-methoxyethyl sulfate (9CI)
 (CA INDEX NAME)

CM 1

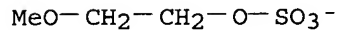
CRN 630393-16-7
 CMF C8 H13 N2 O



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

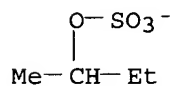
CRN 597579-98-1
 CMF C3 H7 O5 S



RN 630393-21-4 HCAPLUS
 CN Pyridinium, 1-(3-oxobutyl)-, 1-methylpropyl sulfate (9CI) (CA INDEX NAME)

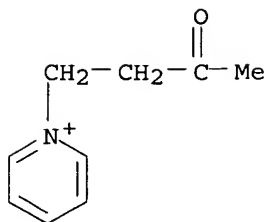
CM 1

CRN 630393-20-3
 CMF C4 H9 O4 S



CM 2

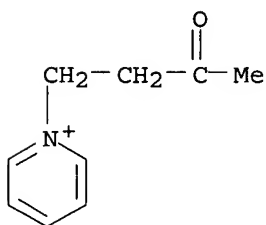
CRN 48120-73-6
 CMF C9 H12 N O



RN 630393-22-5 HCAPLUS
 CN Pyridinium, 1-(3-oxobutyl)-, 1-methylethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 48120-73-6
 CMF C9 H12 N O



CM 2

CRN 44657-45-6
 CMF C3 H7 O4 S

i-Pr-O-SO₃⁻

RN 630393-30-5 HCAPLUS
 CN Pyridinium, 1-(3-oxobutyl)-, 2-ethoxyethyl sulfate (9CI) (CA INDEX NAME)

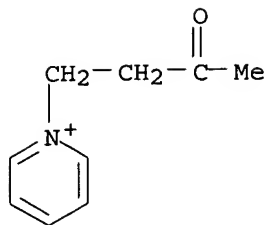
CM 1

CRN 597580-00-2
 CMF C4 H9 O5 S

EtO-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 48120-73-6
 CMF C9 H12 N O



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 37 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:552316 HCAPLUS

DOCUMENT NUMBER: 139:245663

TITLE: Lipase-catalyzed enantioselective acylation in a halogen free ionic liquid solvent system

AUTHOR(S): Itoh, Toshiyuki; Ouchi, Nozomi; Hayase, Shuichi; Nishimura, Yoshihito

CORPORATE SOURCE: Department of Materials Science, Faculty of Engineering, Tottori University, Tottori, 680-8552, Japan

SOURCE: Chemistry Letters (2003), 32(7), 654-655
CODEN: CMLTAG; ISSN: 0366-7022

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:245663

AB Lipase-catalyzed enantioselective transesterification was demonstrated using several types of imidazolium alkyl sulfates as a reaction medium. The desired optically pure acetate was successfully obtained under the conditions used, although the reaction rate was inferior to that in imidazolium tetrafluoroborate.

IT 401788-98-5 597579-96-9 597579-97-0

597579-99-2 597580-01-3 597580-03-5

RL: NUU (Other use, unclassified); USES (Uses)

(lipase-catalyzed enantioselective acylation in a halogen free ionic liq. solvent system)

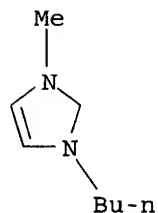
RN 401788-98-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

 $\text{Me}-\text{O}-\text{SO}_3^-$

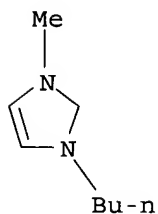
RN 597579-96-9 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

 $\text{Et}-\text{O}-\text{SO}_3^-$

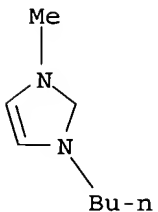
RN 597579-97-0 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, butyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 44826-81-5

CMF C4 H9 O4 S

 n-Bu-O-SO_3^-

RN 597579-99-2 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-methoxyethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 597579-98-1

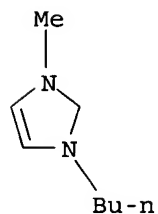
CMF C3 H7 O5 S

 $\text{MeO-CH}_2\text{-CH}_2\text{-O-SO}_3^-$

CM 2

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 597580-01-3 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethoxyethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 597580-00-2

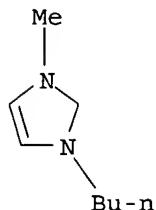
CMF C4 H9 O5 S

 $\text{EtO-CH}_2\text{-CH}_2\text{-O-SO}_3^-$

CM 2

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

RN 597580-03-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-phenoxyethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 597580-02-4

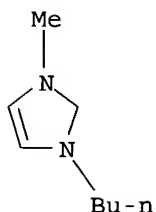
CMF C8 H9 O5 S

PhO-CH₂-CH₂-O-SO₃⁻

CM 2

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 38 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:376708 HCAPLUS

DOCUMENT NUMBER: 138:387435

TITLE: Method for separating substances from solutions containing ionic liquids by means of a membrane

INVENTOR(S): Wasserscheid, Peter; Kragl, Udo; Kroeckel, Jan

PATENT ASSIGNEE(S): Solvent Innovation Gmbh, Germany

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

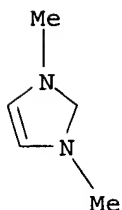
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003039719	A2	20030515	WO 2002-EP12253	20021103
WO 2003039719	A3	20040617		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10154209	A1	20030515	DE 2001-10154209	20011107
PRIORITY APPLN. INFO.:			DE 2001-10154209	A 20011105
OTHER SOURCE(S): MARPAT 138:387435				
AB Difficult volatile or non-volatile substances are separated from solns. containing ionic liqs. by a membrane, either organic membranes such as cellulose or polyamide, or inorg. membranes such as titania.				
IT 97345-90-9P				
RL: PUR (Purification or recovery); PREP (Preparation) (method for separating substances from solns. containing ionic liqs. by means of a membrane)				
RN 97345-90-9 HCAPLUS				
CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)				
CM 1				
CRN 45470-32-4				
CMF C5 H9 N2				



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 39 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:274291 HCAPLUS

DOCUMENT NUMBER: 140:165713

TITLE: Industrial preparation of phosphonium ionic liquids

AUTHOR(S): Bradaric, Christine J.; Downard, Andrew; Kennedy, Christine; Robertson, Allan J.; Zhou, Yuehui

CORPORATE SOURCE: Cytec Canada Inc, Niagara Falls, ON, L2E 6T4, Can.

SOURCE: Green Chemistry (2003), 5(2), 143-152

CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB While a great deal of attention has been given to imidazolium ionic liqs. in recent years, very few investigations involving phosphonium ionic liqs. have been reported in the journal literature. The same is not true in the patent literature, where, in addition to filings concerning phosphonium ionic liqs. specifically, filings concerning imidazolium ionic liqs. routinely claim the manufacture and/or use of phosphonium ionic liqs. as well. Despite this activity, com. applications, and hence com. production, have not materialized for any ionic liqs. to date. Here we present an account of our research into ionic liqs. from the perspective of a future, large-scale producer of ionic liqs. for industrial applications. Several phosphonium ionic liqs. are discussed with respect to synthesis and phys. characteristics, and broad comparisons are made to relevant imidazolium systems. Full synthetic and characterization data are reported for several representative compds. including trihexyl(tetradecyl)phosphonium chloride, trihexyl(tetradecyl)phosphonium bis(2,4,4-trimethylpentyl)phosphinate, trihexyl(tetradecyl)phosphonium tetrafluoroborate, triisobutyl(methyl)phosphonium tosylate, and triisobutyl(methyl)phosphonium dimethylphosphate.

IT 69056-62-8P 654057-98-4P 654057-99-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(industrial preparation and characterization of various phosphonium ionic liqs.)

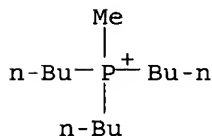
RN 69056-62-8 HCAPLUS

CN Phosphonium, tributylmethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 34217-64-6

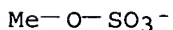
CMF C13 H30 P



CM 2

CRN 21228-90-0

CMF C H3 O4 S



RN 654057-98-4 HCAPLUS
CN Phosphonium, tributylethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

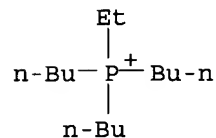
CM 1

CRN 48028-76-8
CMF C2 H5 O4 S

Et-O-SO₃⁻

CM 2

CRN 45154-70-9
CMF C14 H32 P



RN 654057-99-5 HCAPLUS
CN Phosphonium, tetrabutyl-, butyl sulfate (9CI) (CA INDEX NAME)

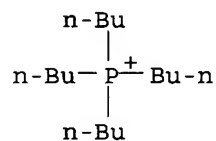
CM 1

CRN 44826-81-5
CMF C4 H9 O4 S

n-Bu-O-SO₃⁻

CM 2

CRN 15853-37-9
CMF C16 H36 P



REFERENCE COUNT: 106 THERE ARE 106 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L27 ANSWER 40 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:221657 HCAPLUS
DOCUMENT NUMBER: 138:255229

TITLE: Preparation of organic ammonium and phosphonium sulfates as ionic liquids
 INVENTOR(S): Wasserscheid, Peter; Boesmann, Andreas; Van Hal, Roy
 PATENT ASSIGNEE(S): Solvent Innovation GmbH, Germany
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003022812	A1	20030320	WO 2002-EP10206	20020911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10145747	A1	20030403	DE 2001-10145747	20010917
EP 1425268	A1	20040609	EP 2002-797984	20020911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005515168	T2	20050526	JP 2003-526888	20020911
US 2004262578	A1	20041230	US 2004-798796	20040311
PRIORITY APPLN. INFO.:				
			DE 2001-10145747	A 20010917
			WO 2002-EP10206	W 20020911

OTHER SOURCE(S): MARPAT 138:255229

AB K+RSO4- [R = (unsatd.) aliphatic or alicyclic, (functionalized) hydrocarbon chain having between 3-36 C atoms; K = quaternary ammonium, phosphonium, imidazolium, pyridinium, pyrazolium, triazolium], were prepared Thus, 1,3-dimethylimidazolium chloride in CH2Cl2 was treated portionwise with Na octylsulfate followed by stirring for 40 h to give 80% 1,3-dimethylimidazolium octylsulfate. The novel ionic liqs. can be used as solvents or solvent additives in chemical reactions, as extracting agents or as

heat transfer media.

IT 445473-58-5P 502421-75-2P 502421-76-3P

RL: CAT (Catalyst use); RGT (Reagent); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of organic ammonium and phosphonium sulfates as ionic liqs.)

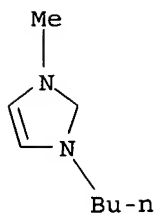
RN 445473-58-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

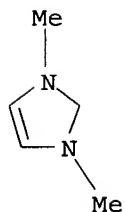
CRN 45102-38-3
CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

RN 502421-75-2 HCAPLUS
CN 1H-Imidazolium, 1,3-dimethyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4
CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

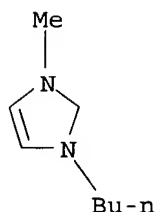
CRN 45102-38-3
CMF C8 H17 O4 S

Me- (CH₂)₇-O-SO₃⁻

RN 502421-76-3 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-methyl-, dodecyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 557-47-1

CMF C12 H25 O4 S

Me⁻ (CH₂)₁₁-O-SO₃⁻

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 41 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:202692 HCAPLUS

DOCUMENT NUMBER: 138:205475

TITLE: Transesterification using phase transfer catalysts

INVENTOR(S): Halpern, Marc E.; Crick, Darrell

PATENT ASSIGNEE(S): PTC Organics, Inc., USA

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003020782	A2	20030313	WO 2002-US27276	20020828
WO 2003020782	A3	20031030		
W: CA, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
US 2004167343	A1	20040826	US 2004-784713	20040224
US 6833463	B2	20041221		
PRIORITY APPLN. INFO.:			US 2001-315582P	P 20010829
			WO 2002-US27276	A1 20020828

OTHER SOURCE(S): MARPAT 138:205475

AB The invention provides reaction mixts. comprising polyols, triglycerides, base initiators, and phase-transfer catalysts for performing transesterification reactions. The reaction product comprises a mixture of polyol monoesters, polyol diesters, triglycerides, and glycerol.

IT 500596-31-6, Methyltrilaurylammonium methylsulfate

RL: CAT (Catalyst use); USES (Uses)
(transesterification using phase transfer catalysts)

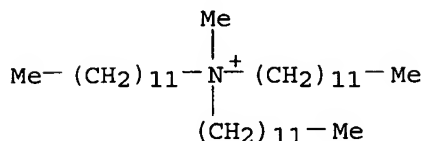
RN 500596-31-6 HCAPLUS

CN 1-Dodecanaminium, N,N-didodecyl-N-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45313-91-5

CMF C37 H78 N



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 42 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:149733 HCAPLUS

DOCUMENT NUMBER: 139:85095

TITLE: Three-component coupling reactions in ionic liquids: a facile synthesis of α-aminonitriles

AUTHOR(S): Yadav, Jhillu S.; Reddy, Basi. V. S.; Eshwaraiah, B.; Srinivas, Mende; Vishnumurthy, P.

CORPORATE SOURCE: Division of Organic Chemistry, Indian Institute of Chemical Technology, Hyderabad, 500 007, India

SOURCE: New Journal of Chemistry (2003), 27(3), 462-465

CODEN: NJCHE5; ISSN: 1144-0546

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:85095

AB Aryl imines, derived in situ from aldehydes and amines, smoothly undergo addition with trimethylsilyl cyanide in 1-butyl-3-methylimidazolium tetrafluoroborate or 1-butyl-3-methylimidazolium hexafluorophosphate ionic liqs. under mild and neutral reaction conditions to afford the corresponding α-aminonitriles in excellent yields. The ionic liqs. can be recycled in five to six runs without any apparent loss of activity.

IT 401788-98-5, 1-Butyl-3-methylimidazolium methylsulfate

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of α-aminonitriles by coupling of aldehydes, amines and trimethylsilyl cyanide in ionic liqs.)

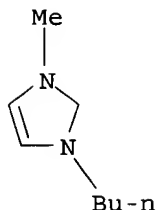
RN 401788-98-5 HCAPLUS

CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 43 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:964713 HCAPLUS

DOCUMENT NUMBER: 138:41769

TITLE: Separation of contaminant gases from natural gas by contact with membranes containing ionic liquids

INVENTOR(S): Brennecke, Joan F.; Maginn, Edward J.

PATENT ASSIGNEE(S): India

SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002189444	A1	20021219	US 2002-113400	20020401
US 6579343	B2	20030617		

PRIORITY APPLN. INFO.: US 2001-280032P P 20010330

OTHER SOURCE(S): MARPAT 138:41769

AB Natural gas is separated from contaminant gases, especially carbon dioxide, nitrogen, and water, by contact with a liquid heterocyclic nitrogen-containing cation selected from unsubstituted and N-C1-18-alkyl-substituted imidazolium, pyrazolium, oxazolium, thiazolium, triazolium, pyridinium, pyridazinium, pyrimidinium, and pyrazinium salts (e.g., hydroxides, chlorides, bromides, iodides, borates, tetrafluoroborates, cuprates, dichlorocuprate (I), phosphates, hexafluorophosphates, hexafluoroantimonates, perchlorates, nitrites, nitrates, sulfates, carboxylates, sulfonates, sulfonimides, and phosphonates). Addnl. hydrocarbyl substituents may also be present. The liquid ionic compds. are typically present in the gas separation means as a supported liquid membrane, in which the gases selectively diffuses through the membrane.

IT 342573-75-5

RL: CPS (Chemical process); DEV (Device component use); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(membrane; separation of contaminant gases from natural gas by contact with membranes containing ionic liqs.)

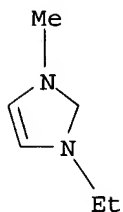
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L27 ANSWER 44 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:801868 HCAPLUS

DOCUMENT NUMBER: 138:17060

TITLE: Measurement of Activity Coefficients at Infinite Dilution in Ionic Liquids Using the Dilutor Technique

AUTHOR(S): Krummen, Michael; Wasserscheid, Peter; Gmehling, Juergen

CORPORATE SOURCE: Carl von Ossietzky Universitaet Oldenburg, Oldenburg, D-26111, Germany

SOURCE: Journal of Chemical and Engineering Data (2002), 47(6), 1411-1417

CODEN: JCEAAX; ISSN: 0021-9568

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Activity coeffs. at infinite dilution have been measured with the dilutor technique for 20 solutes (alkanes, alkenes, cyclic hydrocarbons, aromatic hydrocarbons, ketones, alcs., and water) in the ionic liqs.

1-methyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide,

1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide,

1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, and

1-ethyl-3-methylimidazolium ethylsulfate. The measurements were carried

out in the temperature range between 293.15 K and 333.15 K. The selectivities at infinite dilution ($S_{ij}^\infty = \gamma_i^\infty/\gamma_j^\infty$) for the separation of aliphatics from aroms. and n-hexane from 1-hexene are presented and discussed. From the results it can be concluded that the ionic liqs. investigated show different advantages compared to those of the entrainers actually used for the separation of aliphatic from aromatic hydrocarbons by extractive distillation or extraction

IT 342573-75-5

RL: PRP (Properties)

(activity and excess enthalpy of alkanes, alkenes, cyclic hydrocarbons, aromatic hydrocarbons, ketones, alcs., and water at infinite dilution in ionic liqs. using dilutor technique)

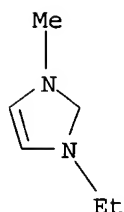
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 45 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:753994 HCAPLUS

DOCUMENT NUMBER: 138:338049

TITLE: Efficient, halide free synthesis of new, low cost ionic liquids: 1,3-dialkylimidazolium salts containing methyl- and ethyl-sulfate anions

AUTHOR(S): Holbrey, John D.; Reichert, W. Matthew; Swatloski, Richard P.; Broker, Grant A.; Pitner, William R.; Seddon, Kenneth R.; Rogers, Robin D.

CORPORATE SOURCE: Center for Green Manufacturing and Department of Chemistry, The University of Alabama, Tuscaloosa, AL, 35487, USA

SOURCE: Green Chemistry (2002), 4(5), 407-413
CODEN: GRCHFJ; ISSN: 1463-9262

PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 138:338049

AB New low-cost ionic liqs. containing methyl- and ethyl-sulfate anions can be easily and efficiently prepared under ambient conditions by the reaction of 1-alkylimidazoles with di-Me sulfate and di-Et sulfate. The preparation and characterization of a series of 1,3-dialkylimidazolium alkyl sulfate and 1,2,3-trialkylimidazolium alkyl sulfate salts are reported. 1,3-Dialkylimidazolium salts containing at least one non-Me N-alkyl substituent are liqs. at, or below room, temperature. Three salts were crystalline at

room temperature, the single crystal x-ray structure of 1,3-dimethylimidazolium Me sulfate was determined and shows the formation of discrete ribbons comprising of two anion-cation hydrogen-bonded chains linked via intra-chain hydrogen-bonding, but little, or no inter-ribbon hydrogen-bonding. The salts are stable, water soluble, inherently chloride-free, display an electrochem. window of greater than 4 V, and can be used as alternatives to the corresponding halide salts in metathesis reactions to prepare other ionic liqs. including 1-butyl-3-methylimidazolium hexafluorophosphate.

IT 65086-12-6P 97345-90-9P 342573-75-5P
 401788-98-5P 516474-01-4P 516474-02-5P
 516474-04-7P 516474-06-9P 516474-07-0P
 516474-08-1P

RL: NUU (Other use, unclassified); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
 (synthesis of 1,3-dialkylimidazolium salts containing Me- and Et-sulfate anions useful for ionic liqs.)

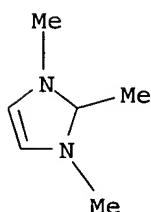
RN 65086-12-6 HCAPLUS

CN 1H-Imidazolium, 1,2,3-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65086-10-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

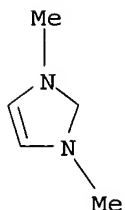
Me-O-SO₃⁻

RN 97345-90-9 HCAPLUS
CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

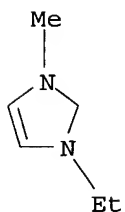
Me-O-SO₃⁻

RN 342573-75-5 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

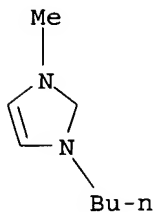
CMF C2 H5 O4 S

Et-O-SO₃⁻

RN 401788-98-5 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

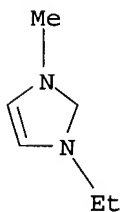
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 516474-01-4 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4
CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0
CMF C H3 O4 S

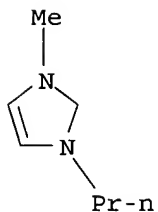
Me-O-SO₃⁻

RN 516474-02-5 HCAPLUS
CN 1H-Imidazolium, 1-methyl-3-propyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-06-0

CMF C7 H13 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

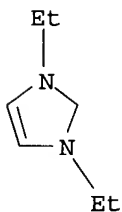
Me-O-SO₃⁻

RN 516474-04-7 HCAPLUS
CN 1H-Imidazolium, 1,3-diethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 67711-49-3

CMF C7 H13 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8

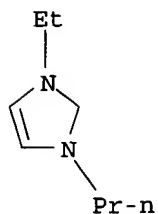
CMF C2 H5 O4 S

Et-O-SO₃⁻

RN 516474-06-9 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-3-propyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 120416-65-1
CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

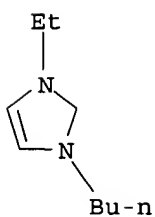
CRN 48028-76-8
CMF C2 H5 O4 S

Et-O-SO₃⁻

RN 516474-07-0 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-ethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 145022-47-5
CMF C9 H17 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

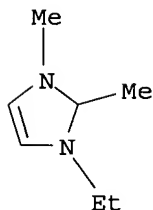
CRN 48028-76-8
CMF C2 H5 O4 S

Et-O-SO₃⁻

RN 516474-08-1 HCAPLUS
CN 1H-Imidazolium, 1-ethyl-2,3-dimethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 131097-15-9
CMF C7 H13 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8
CMF C2 H5 O4 S

Et-O-SO₃⁻

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 46 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:736211 HCAPLUS
DOCUMENT NUMBER: 137:265055
TITLE: Ionic liquids as selective additives for the separation of close-boiling or azeotropic mixtures
INVENTOR(S): Arlt, Wolfgang; Seiler, Matthias; Jork, Carsten; Schneider, Thomas
PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002074718	A2	20020926	WO 2002-EP2824	20020314
WO 2002074718	A3	20021128		

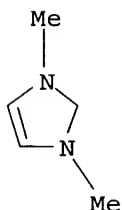
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,

TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 DE 10136614 A1 20030206 DE 2001-10136614 20010717
 CA 2440528 AA 20020926 CA 2002-2440528 20020314
 EP 1372807 A2 20040102 EP 2002-732483 20020314
 EP 1372807 B1 20041013
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 BR 2002008176 A 20040323 BR 2002-8176 20020314
 JP 2004525924 T2 20040826 JP 2002-573729 20020314
 AT 279248 E 20041015 AT 2002-732483 20020314
 US 2004133058 A1 20040708 US 2003-471546 20030911
 PRIORITY APPLN. INFO.: DE 2001-10114734 A 20010320
 DE 2001-10136614 A 20010717
 WO 2002-EP2824 W 20020314
 AB The invention relates to a method for separating close-boiling homo and
 heteroazeotropic mixts. using ionic liqs. The method is superior to
 conventional extractive rectification in terms of cost-effectiveness and
 exergetic aspects as a result of the selectivity and the unusual
 characteristic profile of the ionic liqs.
 IT 97345-90-9
 RL: NUU (Other use, unclassified); USES (Uses)
 (ionic liqs. as selective additives for the separation
 of close-boiling or azeotropic mixts.)
 RN 97345-90-9 HCAPLUS
 CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 47 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:590906 HCAPLUS

DOCUMENT NUMBER: 138:206782
 TITLE: 1-n-Butyl-3-methylimidazolium ([bmim]) octylsulfate - an even 'greener' ionic liquid
 AUTHOR(S): Wasserscheid, Peter; van Hal, Roy; Boesmann, Andreas
 CORPORATE SOURCE: Institut fuer Technische Chemie und Makromolekulare Chemie, RWTH Aachen, Aachen, D-52074, Germany
 SOURCE: Green Chemistry (2002), 4(4), 400-404
 CODEN: GRCHFJ; ISSN: 1463-9262
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English

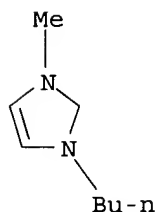
AB A halogen-free ionic liquid, 1-n-butyl-3-methylimidazolium ([bmim]) [n-C₈H₁₇OSO₃] octylsulfate was prepared, which is relatively hydrolysis-stable. 1-Butyl-3-methylimidazolium chloride and Na octyl sulfate [n-C₈H₁₇-O-SO₃] were dissolved in water at 60°; water was removed under vacuum leaving a white solid; the product was extracted with CH₂Cl₂ and purified to obtain a chloride-free light yellow oil in 73% yield, which slowly crystallized when stored at 4°. The [bmim]-octylsulfate ionic liquid was used as solvent in Rh-catalyzed hydroformylation of 1-octene. The advantages of the bmim-octylsulfate ionic liqs. are good hydrolysis stability, low volatility, no halogens, ease of disposal, and low toxicity.

IT 500214-09-5P, 1-Butyl-3-methylimidazolium octylsulfate
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
 (ionic liq., hydroformylation solvent;
 preparation of halogen-free Bu-methylimidazolium octylsulfate ionic liq. and use in hydroformylation of octene)

RN 500214-09-5 HCAPLUS
 CN 1H-Imidazolium, 1-butyl-3-methyl-, 2-ethylhexyl sulfate (9CI) (CA INDEX NAME)

CM 1

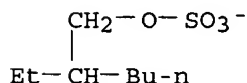
CRN 80432-08-2
 CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 63654-70-6
 CMF C8 H17 O4 S



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 48 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:481348 HCAPLUS

DOCUMENT NUMBER: 137:155129

TITLE: Use of Ionic Liquids to Increase the Yield and Enzyme Stability in the β -Galactosidase Catalyzed Synthesis of N-Acetyllactosamine

AUTHOR(S): Kaftzik, Nicole; Wasserscheid, Peter; Kragl, Udo

CORPORATE SOURCE: Department of Chemistry, Rostock University, Rostock, 18051, Germany

SOURCE: Organic Process Research & Development (2002), 6(4), 553-557

CODEN: OPRDFK; ISSN: 1083-6160

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:155129

AB The use of ionic liqs. as alternative solvents for enzyme catalysis was investigated. β -Galactosidase from *Bacillus circulans* catalyzes the synthesis of N-acetyllactosamine starting from lactose and N-acetylglucosamine in a transglycosylation reaction. The addition of 25% volume/volume of 1,3-di-methyl-imidazol-Me sulfate [MMIM] [MeSO₄] as a water-miscible ionic liquid suppresses the secondary hydrolysis of the formed product, resulting in doubling the yield to almost 60%. The enzyme can be reused several times after ultrafiltration of the reaction mixture without loss of activity. Results of different amts. of ionic liqs. in the reaction medium on the thermostability of the galactosidase as well as on oxidoreductases are presented as well.

IT 7588-22-9 97345-90-9 445473-58-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(use of ionic liqs. to increase the yield and enzyme stability in the bgalactosidase catalyzed synthesis of nacetyllactosamine)

RN 7588-22-9 HCAPLUS

CN Ethanaminium, N,N-diethyl-N-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 21228-90-0

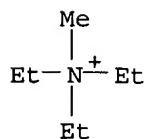
CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 302-57-8

CMF C7 H18 N

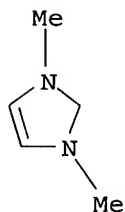


RN 97345-90-9 HCAPLUS
CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

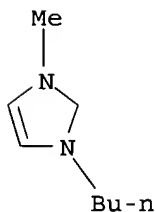
Me⁻ O⁻ SO₃⁻

RN 445473-58-5 HCAPLUS
CN 1H-Imidazolium, 1-butyl-3-methyl-, octyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 80432-08-2

CMF C8 H15 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 45102-38-3

CMF C8 H17 O4 S

Me⁻ (CH₂)₇ O⁻ SO₃⁻

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 49 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2002:364059 HCAPLUS
 DOCUMENT NUMBER: 136:368536
 TITLE: Enzymatic catalysis in the presence of ionic liquids
 INVENTOR(S): Kragl, Udo; Kaftzik, Nicole; Schoefer, Sonja;
 Wasserscheid, Peter
 PATENT ASSIGNEE(S): Solvent Innovation Gmbh, Germany
 SOURCE: Eur. Pat. Appl., 15 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1205555	A1	20020515	EP 2000-124195	20001108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002038784	A1	20020516	WO 2001-EP12869	20011107
WO 2002038784	B1	20030320		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002020685	A5	20020521	AU 2002-20685	20011107
EP 1332221	A1	20030806	EP 2001-993696	20011107
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004513639	T2	20040513	JP 2002-542099	20011107
US 2004096932	A1	20040520	US 2004-416067	20040102
PRIORITY APPLN. INFO.:			EP 2000-124195	A 20001108
			WO 2001-EP12869	W 20011107

OTHER SOURCE(S): MARPAT 136:368536

AB A method is provided for enhanced enzymic catalysis by the use of ionic fluids. Thus, the enzymic oxidation of formic acid to carbon dioxide by formate dehydrogenase coupled with the reduction of NAD⁺ to NADH was enhanced by conducting the reaction in a 50% (volume/volume) solution of methyl-methyl-imidazoilium methylsulfate.

IT 7588-22-9, Triethylmethylammonium methylsulfate 97345-90-9
 RL: BCP (Biochemical process); PEP (Physical, engineering or chemical process); PYP (Physical process); BIOL (Biological study); PROC (Process) (enzymic catalysis in presence of ionic liqs.)

RN 7588-22-9 HCAPLUS

CN Ethanaminium, N,N-diethyl-N-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 21228-90-0

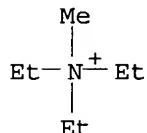
CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 302-57-8

CMF C7 H18 N



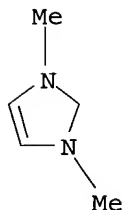
RN 97345-90-9 HCAPLUS

CN 1H-Imidazolium, 1,3-dimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 45470-32-4

CMF C5 H9 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 50 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:293603 HCAPLUS

DOCUMENT NUMBER: 136:309757

TITLE: Aromatic sulfonation reactions conducted in the presence of ionic liquids

INVENTOR(S): Earle, Martyn John; Katdare, Suhas Prabhakar

PATENT ASSIGNEE(S): The Queen's University of Belfast, UK

SOURCE: PCT Int. Appl., 20 pp.

DOCUMENT TYPE: CODEN: PIXXD2
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: English
 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030878	A1	20020418	WO 2001-GB4427	20011005
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2425168	AA	20020418	CA 2001-2425168	20011005
AU 2001093969	A5	20020422	AU 2001-93969	20011005
EP 1324982	A1	20030709	EP 2001-974454	20011005
EP 1324982	B1	20041208		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004511461	T2	20040415	JP 2002-534266	20011005
AT 284384	E	20041215	AT 2001-974454	20011005
US 2004242932	A1	20041202	US 2003-398531	20030616
PRIORITY APPLN. INFO.:			GB 2000-24747	A 20001010
			WO 2001-GB4427	W 20011005

OTHER SOURCE(S): CASREACT 136:309757

AB The sulfonation of an aromatic compds. (e.g., of toluene into 2- and 4-toluenesulfonic acids) is described where the aromatic compound and sulfonating agent are mixed in the presence of an ionic liquid (e.g., 1-ethyl-3-methylimidazolium bisulfate). This sulfonation method in water-stable ionic liqs. offers advantages over conventional sulfonation reactions in that no byproducts are formed, the ionic liquid is not consumed, and the sulfonating agent (e.g., SO₃) is relatively inexpensive.

IT 342573-75-5

RL: NUU (Other use, unclassified); RGT (Reagent); RACT (Reactant or reagent); USES (Uses)

(ionic liq.; aromatic sulfonation reactions conducted in the presence of ionic liqs.)

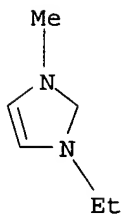
RN 342573-75-5 HCAPLUS

CN 1H-Imidazolium, 1-ethyl-3-methyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 65039-03-4

CMF C6 H11 N2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 48028-76-8
CMF C2 H5 O4 SEt-O-SO₃⁻REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 51 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:275767 HCAPLUS

DOCUMENT NUMBER: 136:284477

TITLE: Method of coating fine particle with lipid film

INVENTOR(S): Kato, Yasuki; Yamauchi, Masahiro; Kusano, Hiroko;
Iwata, Takeshi; Uochi, Takaaki; Akinaga, Shiro

PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028367	A1	20020411	WO 2001-JP8759	20011004
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001094185	A5	20020415	AU 2001-94185	20011004
CA 2424619	AA	20030403	CA 2001-2424619	20011004
EP 1323415	A1	20030702	EP 2001-974690	20011004
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
US 2004022938	A1	20040205	US 2003-398222	20030703
PRIORITY APPLN. INFO.:			JP 2000-305065	A 20001004
			WO 2001-JP8759	W 20011004

AB Disclosed is a simple method of coating fine particles with a lipid film safely and efficiently. The method is characterized in that an aqueous polar-organic-solvent solution, which contains fine particles dispersed therein and a lipid dissolved therein, is modified so as to reduce the proportion of the polar organic solvent to thereby coat each fine particle with a lipid film. A dispersion containing anionic dextran fluorescein (FD) 10, 1,2-dioleoyl-3-trimethyl ammoniopropene (DOTAP) 60, 1,2-distearoyl-sn-glycero-3-phosphatidylethanolamine-N-polyethylene glycol 2000 (PEG-DSPE) 24 mg was prepared and ethanol 4 mL was added therein. The obtained dispersion was mixed with a solution containing egg yolk phosphatidylcholine

240,

PEG-DSPE 50 mg, and ethanol 1 mL. Then, the concentration of ethanol was gradually adjusted to 5 % with water 92 mL, to obtain a liposome dispersion having average particle size of 134 nm. The liposome showed improved blood retention time of the FD in rats.

IT 144189-73-1, DOTAP

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method of coating drug fine particles with lipid films by using with polar organic solvent solns.)

RN 144189-73-1 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-2,3-bis[[(9Z)-1-oxo-9-octadecenyl]oxy]-, methyl sulfate (9CI) (CA INDEX NAME)

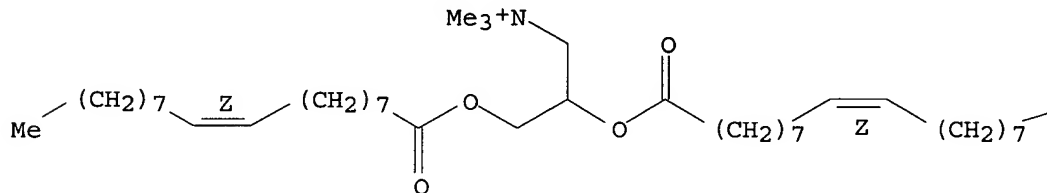
CM 1

CRN 113669-21-9

CMF C42 H80 N O4

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

Me

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 52 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:53855 HCAPLUS

DOCUMENT NUMBER: 137:21714

TITLE: Synthesis of 1,2,3-benzenetriol triacetate by phase-transfer catalysis

AUTHOR(S): Zhang, Jian-feng; Li, Xiao-ru; Liu, Jia-jia; Hu, Yue-hua; Xu, Jing

CORPORATE SOURCE: Coll. Chem. Chem. Eng., Central South Univ., Changsha, 410083, Peop. Rep. China
 SOURCE: Zhongnan Gongye Daxue Xuebao, Ziran Kexueban (2001), 32(5), 491-493
 CODEN: ZGDXAT
 PUBLISHER: Zhongnan Gongye Daxue Xuebao Bianji Weiyuanhui
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese

AB 1,2,3-Benzenetriol triacetat (BTTA), which was generally prepared from pyrogallol and chloroacetic acid in an alkali solution, can be synthesized with a high yield by the catalysis of tributylethylammonium ethosulfate in chloroform solvent. The effect of different catalysts was investigated and tributylethylammonium ethylsulfate was chosen for its high performance, of which the amount was optimized to be 1:50 vs. pyrogallol. The reaction conditions of synthesis were optimized as follows: the molar ratio of chloroacetic acid (CAA) to pyrogallol 3.3:1, CAA to sodium hydroxide 7.0:1, solvent chloroform 100 mL and reaction time 1.5 h under solvent reflux temperature. Under these conditions, the yield may reach 90.5% BTTA. IR spectrum of BTTA was developed and studied.

IT 68052-51-7, Tributylethylammonium ethylsulfate
 RL: CAT (Catalyst use); USES (Uses)
 (synthesis of 1,2,3-benzenetriol triacetate by **phase-transfer** catalysis)

RN 68052-51-7 HCAPLUS

CN 1-Butanaminium, N,N-dibutyl-N-ethyl-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 48028-76-8

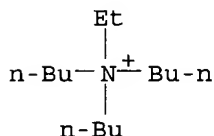
CMF C2 H5 O4 S

Et-O-SO₃⁻

CM 2

CRN 16208-32-5

CMF C14 H32 N



L27 ANSWER 53 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:23498 HCAPLUS

DOCUMENT NUMBER: 136:69727

TITLE: Preparation of glycidyl ethers in the absence of water and organic solvents

INVENTOR(S): Lee, Hyung Min; Han, Ho Chul; Park, Jong Mok; Yung, Jung Ho

PATENT ASSIGNEE(S): Korea Research Institute of Chemical Technology, S. Korea

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002003428	A2	20020109	JP 2001-131921	20010427
KR 2002001905	A	20020109	KR 2000-23327	20000501
US 2002004605	A1	20020110	US 2001-819823	20010329
US 6392064	B2	20020521		

PRIORITY APPLN. INFO.: KR 2000-23327 A 20000501

OTHER SOURCE(S): CASREACT 136:69727; MARPAT 136:69727

AB Title compds. are prepared by reaction of alcs. with epichlorohydrin in the presence of phase-transfer catalysts and alkali metal hydroxides in the absence of water and organic solvents. Octanol was reacted with epichlorohydrin in the presence of Bu₄NBr and NaOH at 30° for 3 h to give 90% octyl glycidyl ether.

IT 18602-17-0 70776-69-1 110927-59-8
 125464-00-8 125464-20-2 125464-22-4
 347896-54-2 347896-56-4 384828-89-1
 384828-91-5 384828-93-7 384828-95-9

RL: CAT (Catalyst use); USES (Uses)
 (preparation of glycidyl ethers in absence of water and organic solvents)

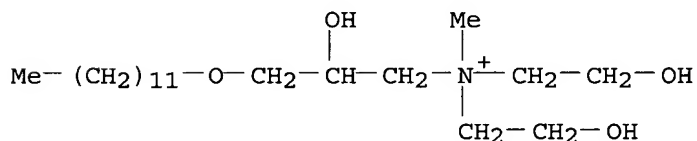
RN 18602-17-0 HCAPLUS

CN 1-Propanaminium, 3-(dodecyloxy)-2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 45287-10-3

CMF C20 H44 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S

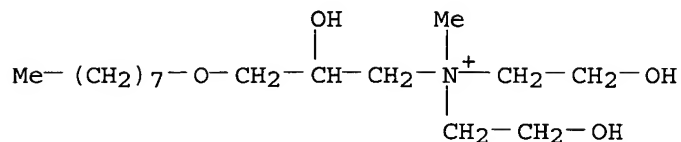
Me-O-SO₃⁻

RN 70776-69-1 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-(octyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

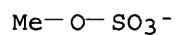
CM 1

CRN 70776-68-0
CMF C16 H36 N O4



CM 2

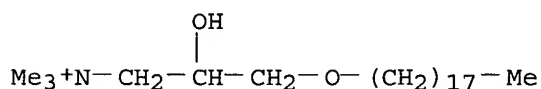
CRN 21228-90-0
CMF C H3 O4 S



RN 110927-59-8 HCAPLUS
CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-(octadecyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

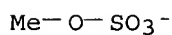
CM 1

CRN 110927-58-7
CMF C24 H52 N O2



CM 2

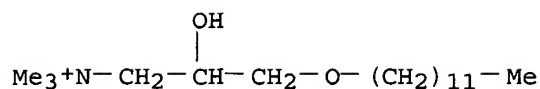
CRN 21228-90-0
CMF C H3 O4 S



RN 125464-00-8 HCAPLUS
CN 1-Propanaminium, 3-(dodecyloxy)-2-hydroxy-N,N,N-trimethyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

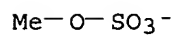
CRN 125463-99-2
CMF C18 H40 N O2



CM 2

CRN 21228-90-0

CMF C H3 O4 S



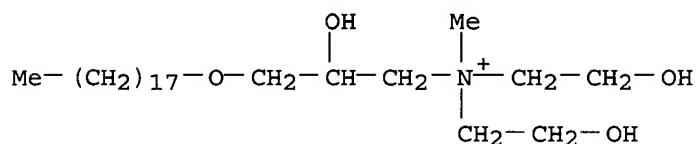
RN 125464-20-2 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-(octadecyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 125464-19-9

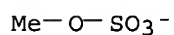
CMF C26 H56 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S



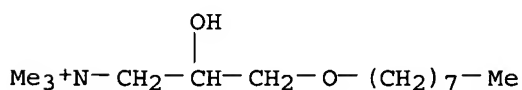
RN 125464-22-4 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-(octyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 125464-21-3

CMF C14 H32 N O2



CM 2

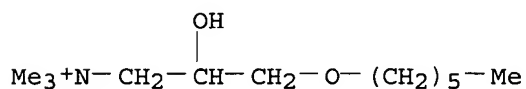
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 347896-54-2 HCAPLUS
CN 1-Propanaminium, 3-(hexyloxy)-2-hydroxy-N,N,N-trimethyl-, methyl sulfate
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 347896-53-1
CMF C12 H28 N O2



CM 2

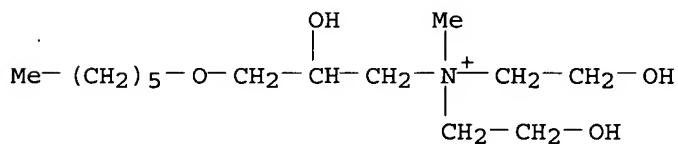
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 347896-56-4 HCAPLUS
CN 1-Propanaminium, 3-(hexyloxy)-2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-,
methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 347896-55-3
CMF C14 H32 N O4



CM 2

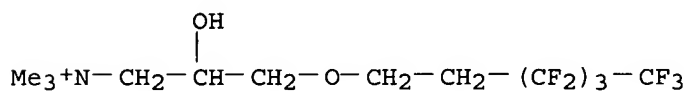
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 384828-89-1 HCAPLUS
 CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-[(3,3,4,4,5,5,6,6,6-nonafluorohexyl)oxy]-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

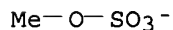
CM 1

CRN 384828-88-0
 CMF C12 H19 F9 N O2



CM 2

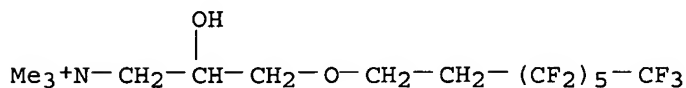
CRN 21228-90-0
 CMF C H3 O4 S



RN 384828-91-5 HCAPLUS
 CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

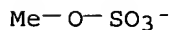
CM 1

CRN 384828-90-4
 CMF C14 H19 F13 N O2



CM 2

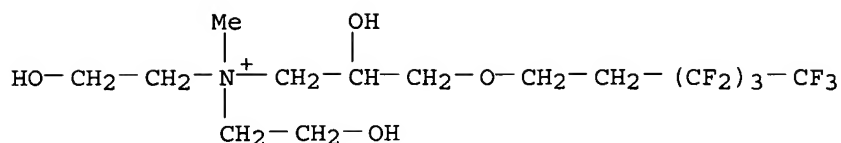
CRN 21228-90-0
 CMF C H3 O4 S



RN 384828-93-7 HCAPLUS
 CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-[(3,3,4,4,5,5,6,6,6-nonafluorohexyl)oxy]-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 384828-92-6
 CMF C14 H23 F9 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

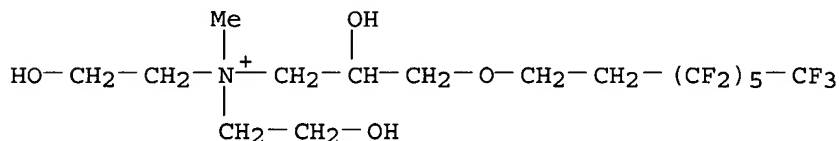
RN 384828-95-9 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-
[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]-, methyl sulfate
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 384828-94-8

CMF C16 H23 F13 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 54 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:323022 HCAPLUS

DOCUMENT NUMBER: 135:78505

TITLE: Improvement of the phase-transfer catalysis method for
synthesis of glycidyl etherAUTHOR(S): Kang, Ho-Cheol; Lee, Byung Min; Yoon, Jungho; Yoon,
MinjoongCORPORATE SOURCE: Applied and Engineering Chemistry Division, Korea
Research Institute of Chemical Technology, Taejon,
305-600, S. Korea

SOURCE: Journal of the American Oil Chemists' Society (2001),

78(4), 423-429

CODEN: JAOCA7; ISSN: 0003-021X

PUBLISHER:

AOCS Press

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB A convenient procedure for the synthesis of aliphatic alkyl glycidyl ether has been studied. The improved preparation of the alkyl glycidyl ether can be achieved by using fatty alc. such as octanol and octadecanol with epichlorohydrin in the presence of phase-transfer catalyst (PTC) such as 1-alkyloxypropan-2-ol-3-trimethyl ammonium methylsulfate, 1-alkyloxypropan-2-ol-3-methyldiethanolammonium methylsulfate, alkyloxy-2-hydroxypropyldimethylamine and alkyloxy-2-hydroxypropyldiethanolamine, tetrabutylammonium bromide, etc. without water and other organic solvents. This method, carried out in solid phase/organic phase (reactants and product themselves), has the following merits: (i) producing the solid byproducts such as sodium chloride and sodium hydroxide which are easily removed by simple filtration, (ii) saving the amount of reactants used such as sodium chloride and phase-transfer catalyst, and (iii) increasing the yields of glycidyl ethers. The yields of octyl glycidyl ether and octadecyl glycidyl ether are 92.0 and 91.7%, resp. The amount of sodium hydroxide used can be saved by from 1.5 to 0.7 molar ratio with respect to octanol in comparison with those in the conventional method using PTC.

IT 65060-02-8

RL: CAT (Catalyst use); USES (Uses)

(improvement of **phase-transfer** catalysis method for synthesis of fatty alc. glycidyl ether with **phase-transfer** catalysts ammonium methylsulfates)

RN 65060-02-8 HCAPLUS

CN 1-Hexadecanaminium, N,N,N-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 6899-10-1

CMF C19 H42 N

Me₃⁺N-(CH₂)₁₅-Me

IT 18602-17-0P 70776-69-1P 110927-59-8P
125464-00-8P 125464-20-2P 125464-22-4P
347896-54-2P 347896-56-4P

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)

(improvement of **phase-transfer** catalysis method for synthesis of fatty alc. glycidyl ether with **phase-transfer** catalysts ammonium methylsulfates)

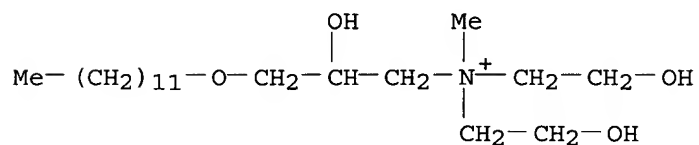
RN 18602-17-0 HCAPLUS

CN 1-Propanaminium, 3-(dodecyloxy)-2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 45287-10-3

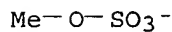
CMF C20 H44 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S



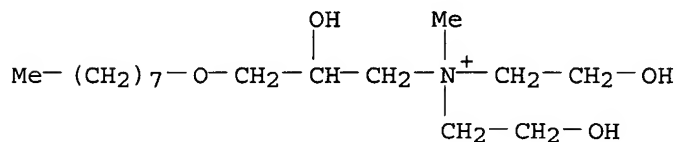
RN 70776-69-1 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-(octyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 70776-68-0

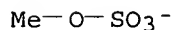
CMF C16 H36 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S

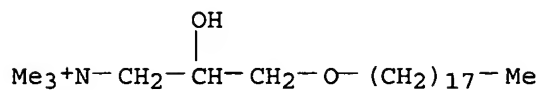


RN 110927-59-8 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-(octadecyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

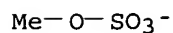
CM 1

CRN 110927-58-7
CMF C24 H52 N O2



CM 2

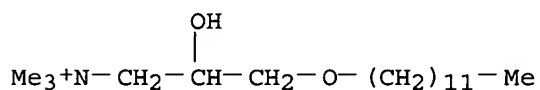
CRN 21228-90-0
CMF C H3 O4 S



RN 125464-00-8 HCAPLUS
CN 1-Propanaminium, 3-(dodecyloxy)-2-hydroxy-N,N,N-trimethyl-, methyl sulfate
(salt) (9CI) (CA INDEX NAME)

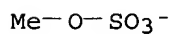
CM 1

CRN 125463-99-2
CMF C18 H40 N O2



CM 2

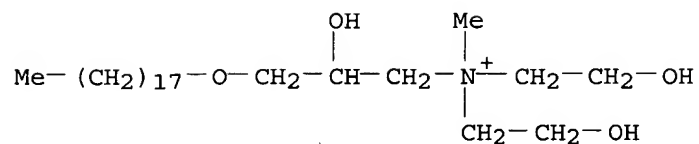
CRN 21228-90-0
CMF C H3 O4 S



RN 125464-20-2 HCAPLUS
CN 1-Propanaminium, 2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-3-(octadecyloxy)-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

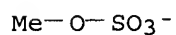
CRN 125464-19-9
CMF C26 H56 N O4



CM 2

CRN 21228-90-0

CMF C H3 O4 S



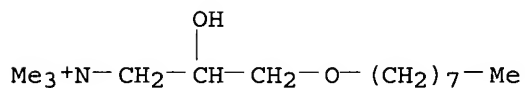
RN 125464-22-4 HCAPLUS

CN 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-3-(octyloxy)-, methyl sulfate
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 125464-21-3

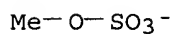
CMF C14 H32 N O2



CM 2

CRN 21228-90-0

CMF C H3 O4 S



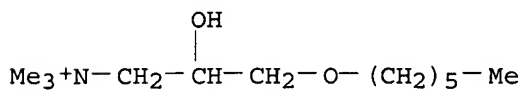
RN 347896-54-2 HCAPLUS

CN 1-Propanaminium, 3-(hexyloxy)-2-hydroxy-N,N,N-trimethyl-, methyl sulfate
(salt) (9CI) (CA INDEX NAME)

CM 1

CRN 347896-53-1

CMF C12 H28 N O2



CM 2

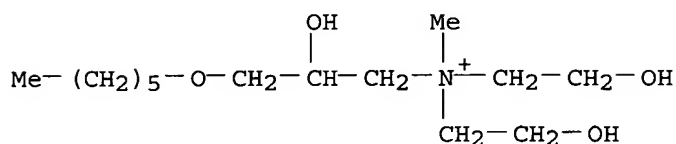
CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

RN 347896-56-4 HCAPLUS
CN 1-Propanaminium, 3-(hexyloxy)-2-hydroxy-N,N-bis(2-hydroxyethyl)-N-methyl-, methyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 347896-55-3
CMF C14 H32 N O4



CM 2

CRN 21228-90-0
CMF C H3 O4 S

Me-O-SO₃⁻

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 55 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:9417 HCAPLUS
DOCUMENT NUMBER: 126:31078
TITLE: Preparation of DMF dimethyl acetal in methanol-hydrocarbon solvent mixtures
INVENTOR(S): Yoshida, Toshio; Tada, Toshizo
PATENT ASSIGNEE(S): Nitto Chemical Industry Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08277251	A2	19961022	JP 1995-101663	19950404
PRIORITY APPLN. INFO.:			JP 1995-101663	19950404

AB Me₂NCH(OMe)₂ (I) is prepared by treatment of DMF-Me₂SO₄ adduct (II) in the presence of MeONa in MeOH-hydrocarbon solvent mixts., removing solid materials, followed by distillation of the filtrates. II was dropwise added to

a mixture of MeONa, hexane, and MeOH at $\leq 40^\circ$, filtered, and the filtrate distilled to give 72% I containing 1.5% Me orthoformate.

IT 21511-55-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of DMF di-Me acetal in methanol-hydrocarbon solvent mixts.)

RN 21511-55-7 HCAPLUS

CN Methanaminium, N-(methoxymethylene)-N-methyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 44397-89-9

CMF C4 H10 N O

$\text{Me}_2\text{N}=\text{CH}-\text{OMe}$

CM 2

CRN 21228-90-0

CMF C H3 O4 S

$\text{Me}-\text{O}-\text{SO}_3^-$

L27 ANSWER 56 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:588690 HCAPLUS

DOCUMENT NUMBER: 125:221880

TITLE: Preparation of 1,3,5-triazines useful for extracting metal species

INVENTOR(S): Hudson, Michael James; Chan, Gabriel Yee Shun; Madic, Charles; Baron, Pascal

PATENT ASSIGNEE(S): University of Reading, UK

SOURCE: Brit. UK Pat. Appl., 13 pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent

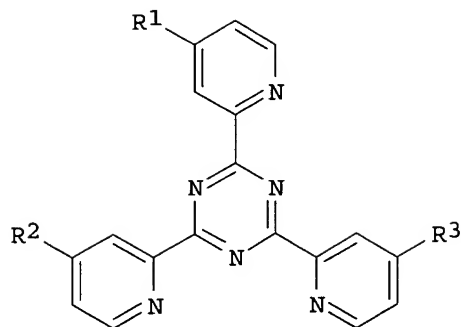
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2296917	A1	19960717	GB 1994-25776	19941221
GB 2296917	B2	19980826		
WO 9802594	A1	19980122	WO 1996-GB1700	19960716
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 850322	A1	19980701	EP 1996-924093	19960716
EP 850322	B1	20010509		
R: FR				
JP 2000511593	T2	20000905	JP 1998-505700	19960716
PRIORITY APPLN. INFO.:			GB 1994-25776	19941221
			WO 1996-GB1700	19960716
OTHER SOURCE(S):			CASREACT 125:221880; MARPAT 125:221880	

GI



I

AB A metal species [particularly an actinide e.g. Am(III)] was extracted from a mixture [particularly one including lanthanide species e.g. Eu(III)] by adding the title triazine [I; R1-R3 = alkyl] to the mixture so that it forms a complex with the desired metal species; partitioning the system between organic and inorg. phases; and recovering the metal species from the organic phase. The triazine I [R1-R3 = tBu] was prepared by trimerization/cyclization of 2-cyano-4-tert-butylpyridine at 65° with a pressure of about 10 kbar in MeOH.

IT 95111-63-0P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 1,3,5-triazines useful for extg. metal species)

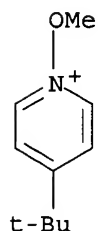
RN 95111-63-0 HCAPLUS

CN Pyridinium, 4-(1,1-dimethylethyl)-1-methoxy-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 95111-62-9

CMF C10 H16 N O



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me⁻ O⁻ SO₃⁻

L27 ANSWER 57 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:516851 HCAPLUS

DOCUMENT NUMBER: 115:116851

TITLE: Improved aqueous cleaner/degreaser compositions
containing organic solvents with low water solubility

INVENTOR(S): Vaneenam, Donald N.

PATENT ASSIGNEE(S): Buckeye International, Inc., USA

SOURCE: PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9100336	A1	19910110	WO 1990-US3316	19900612
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
US 5080831	A	19920114	US 1989-373813	19890629
AU 9059593	A1	19910117	AU 1990-59593	19900612
AU 626704	B2	19920806		
EP 479908	A1	19920415	EP 1990-911174	19900612
EP 479908	B1	19950308		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
JP 05500524	T2	19930204	JP 1990-510099	19900612
CA 2056425	C	19951212	CA 1990-2056425	19900612
PRIORITY APPLN. INFO.:			US 1989-373813	A 19890629
			WO 1990-US3316	A 19900612

AB The title compns. contain water, ≥ 1 organic solvent, and a solubilizing additive which comprises a surfactant and optionally a coupler and is present in a concentration $< .\text{apprx.}10$ times the amount required to

completely solubilize the solvent. The solvent has water solubility 2-6%, is not a hydrocarbon or halocarbon, has ≤ 1 functional group containing O, N, S, or P, dissolves hydrophobic soils, and is present in a concentration exceeding its water solubility. The compns. give better cleaning and degreasing than compns. containing infinitely soluble organic solvents such as

BuOCH₂CH₂OH.

The composition containing PhOCH₂CH₂OH 8.0, dodecylbenzenesulfonic acid 1.2, 50%

NaOH 0.3, Hampene 100 0.6, dyes 0.002, and H₂O 189.9 parts gave good cleaning of less soiled with petroleum gelly.

IT 65060-02-8, Hexadecyltrimethylammonium methosulfate

RL: TEM (Technical or engineered material use); USES (Uses)

(solubilizer, for **solvents** in aqueous cleaner-degreaser compns.)

RN 65060-02-8 HCAPLUS

CN 1-Hexadecanaminium, N,N,N-trimethyl-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 6899-10-1

CMF C19 H42 N

 $\text{Me}_3\text{N}^-(\text{CH}_2)_{15}-\text{Me}$

L27 ANSWER 58 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:32407 HCAPLUS

DOCUMENT NUMBER: 106:32407

TITLE: Phenylldichlorocyclopropanecarboxylic acid derivatives

INVENTOR(S): Kobayashi, Hisafumi; Kurokawa, Takashi; Kawada, Shuji;
Kurozumi, Akira; Kamiya, Noriaki; Shishido, Setsuo;
Sato, Yukie

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

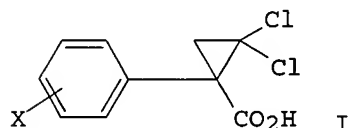
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61148138	A2	19860705	JP 1984-268437	19841221
JP 05044449	B4	19930706		
PRIORITY APPLN. INFO.: GI			JP 1984-268437	19841221



AB The title compds. [I; X = H, halo, alkoxy, PhCH₂, (un)substituted phenoxy], useful as intermediates for insecticides, were prepared via reaction of XC₆H₄COME with CHCl₃ in aqueous NaOH in the presence of phase-transfer catalysts. Thus, aqueous KOH was added dropwise to a mixture of p-EtOC₆H₄COME in CHCl₃ and H₂O containing PhCH₂NEt₃Cl at 10-15° over 10 h. The reaction mixture containing I (X = p-EtO), p-EtOC₆H₄C(:CH₂)CO₂H, and p-EtOC₆H₄CMe(OH)CO₂H was diluted with CHCl₃ and another portion of aqueous KOH solution was added at the same temperature in 10 h to give, after acidification,

93.1% pure I (X = p-EtO).

IT 77785-47-8, Benzyltriethylammonium monomethylsulfate

RL: CAT (Catalyst use); USES (Uses)

(catalyst, **phase-transfer**, for reaction of
chloroform with acetophenone derivs.)

RN 77785-47-8 HCAPLUS

CN Benzenemethanaminium, N,N,N-triethyl-, methyl sulfate (9CI) (CA INDEX
NAME)

CM 1

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 16652-03-2

CMF C13 H22 N

Et₃⁺N-CH₂-Ph

L27 ANSWER 59 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:591388 HCAPLUS

DOCUMENT NUMBER: 101:191388

TITLE: N-Aryl-N'-methyl-N'-methoxyurea derivatives

INVENTOR(S): Bitter, Istvan; Toke, Laszlo; Bonnyay, Peter; Nagy, Sandor; Popradi, Lejos

PATENT ASSIGNEE(S): Eszakyarorszagi Vegyimuvek, Hung.

SOURCE: Hung. Teljes, 13 pp.

CODEN: HUXXB

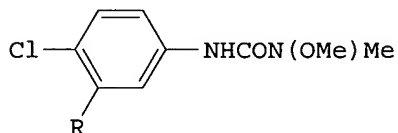
DOCUMENT TYPE: Patent

LANGUAGE: Hungarian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 29702	O	19840228	HU 1980-2897	19801204
HU 185288	B	19841228		
PRIORITY APPLN. INFO.: GI			HU 1980-2897	19801204



AB The title compds. I (R = H or Cl) are prepared from the corresponding aryl isocyanates by reaction with H₂NOH, followed by methylation of the resulting N-aryl-N1-hydroxyurea intermediates in a system consisting of H₂O and an organic solvent immiscible with H₂O, in the presence of a quaternary ammonium or amine phase-transfer catalyst. Thus, 7 g H₂NOH.HCl in 20 mL H₂O and 50 mL dichloroethane was treated at 0 to -10° with 4 g NaOH in 15 mL H₂O, and subsequently with 14.5 g 4-ClC₆H₄NCO in 100 mL C₆H₆. Following the addition of 0.8 g Et₃PhCH₂N⁺Cl⁻, 25 mL Me₂SO₄, and 10.4

g NaOH in 30 mL H₂O N-(4-chlorophenyl)-N1-methyl-N1-methoxycarbamate was obtained in 94% yield.

IT 13106-24-6

RL: CAT (Catalyst use); USES (Uses)
(phase-transfer catalyst, for methylation of
arylhydroxyureas)

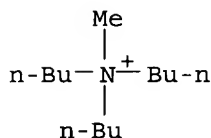
RN 13106-24-6 HCAPLUS

CN 1-Butanaminium, N,N-dibutyl-N-methyl-, methyl sulfate (9CI) (CA INDEX
NAME)

CM 1

CRN 29814-63-9

CMF C13 H30 N



CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

L27 ANSWER 60 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:494452 HCAPLUS

DOCUMENT NUMBER: 97:94452

TITLE: Dry-cleaning compositions

PATENT ASSIGNEE(S): Lion Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57053600	A2	19820330	JP 1980-128023	19800917
JP 59010759	B4	19840310		

PRIORITY APPLN. INFO.: JP 1980-128023 19800917

AB Dry-cleaning comps. contain 5-80% solvents and a composition comprising quaternary ammonium cationic surfactants 15-50, dialkyl sulfosuccinates 3-20, and nonionic surfactants 30-80%. Thus, a cleaning composition contained 40% petroleum solvent and 60% surfactants containing bis(hydroxyethyl)ethylstearylammmonium chloride [65270-81-7] 35, Na dioctyl sulfosuccinate (I) [577-11-7] 15, poly(oxyethylene) nonylphenyl ether [9016-45-9] 50%. The composition had detergency 88%, soil redeposition power (cotton) 95%, water-holding power 7.5 mL, good antistatic

properties, and good softness, compared with 79, 89, 2, good, and good, resp., for composition having linear dodecylbenzenesulfonic acid triethanolamine salt in place of I.

IT 82684-81-9

RL: USES (Uses)

(dry-cleaning compns., containing solvents, dialkyl sulfosuccinates and nonionic surfactants)

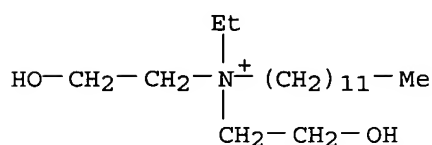
RN 82684-81-9 HCAPLUS

CN 1-Dodecanaminium, N-ethyl-N,N-bis(2-hydroxyethyl)-, ethyl sulfate (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 82684-80-8

CMF C18 H40 N O2



CM 2

CRN 48028-76-8

CMF C2 H5 O4 S

Et-O-SO₃⁻

L27 ANSWER 61 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1980:446212 HCAPLUS

DOCUMENT NUMBER: 93:46212

TITLE: Acetanilides

INVENTOR(S): Eicken, Karl; Rohr, Wolfgang; Linhart, Friedrich

PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 17 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

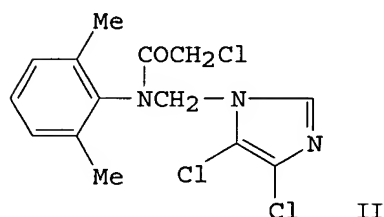
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 2830764	A1	19800131	DE 1978-2830764	19780713
US 4321395	A	19820323	US 1979-40224	19790518
IL 57350	A1	19820930	IL 1979-57350	19790521
JP 55013283	A2	19800130	JP 1979-85120	19790706
EP 7080	A1	19800123	EP 1979-102314	19790709
EP 7080	B1	19810729		
R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
BR 7904345	A	19800408	BR 1979-4345	19790709
AT 125	E	19810815	AT 1979-102314	19790709

CS 208785	P	19810915	CS 1979-4827	19790710
DD 144771	C	19801105	DD 1979-214273	19790711
PL 114229	B2	19810131	PL 1979-217028	19790711
DK 7902927	A	19800114	DK 1979-2927	19790712
ZA 7903511	A	19800827	ZA 1979-3511	19790712
HU 22939	O	19820728	HU 1979-BA3810	19790712
HU 180423	B	19830328		
PRIORITY APPLN. INFO.:			DE 1978-2830764	A 19780713
			EP 1979-102314	A 19790709
GI				



AB Onium compds. were used as phase-transfer catalysts in the reaction of 2,6-Me₂C₆H₃N(CH₂Cl)COCH₂Cl (I) with N-heterocycles. Thus 13.7 parts 4,5-dichloroimidazole and 4.4 parts NaOH in 20 parts H₂O were added to a strongly stirred mixture of 24.6 parts I and 2.0 parts PhCH₂NEt₃Cl in 50 (volume) parts CH₂Cl₂ at 20-5°, and the mixture was stirred 2 h to give 29.9 parts II. Other catalysts included Bu₃PMeBr and Bu₄NHSO₄; other amines included 4-methoxypyrazole and 1,2,4-triazole.

IT 74070-70-5
 RL: CAT (Catalyst use); USES (Uses)
 (phase-transfer catalysts, for reaction of
 2-chloro-N-(chloromethyl)-2',6'-methylacetanilide with heterocyclic
 amines)

RN 74070-70-5 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-(phenylmethyl)-, methyl sulfate (9CI)
 (CA INDEX NAME)

CM 1

CRN 21228-90-0

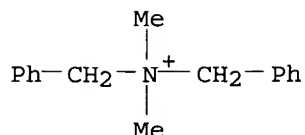
CMF C H3 O4 S

Me-O-SO₃⁻

CM 2

CRN 14800-26-1

CMF C16 H20 N



L27 ANSWER 62 OF 62 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1975:533259 HCAPLUS

DOCUMENT NUMBER: 83:133259

TITLE: Dyeing and/or fluorescent whitening of synthetic organic fiber material with cationic dyes and/or fluorescent whiteners

INVENTOR(S): Schaffner, Karl; Buehler, Jakob; Reinert, Gerhard; Keller, Rudolf

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Patentschrift (Switz.), 11 pp.

CODEN: SWXXAS

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 561327	B	19750430	CH 1972-6817	19720508
CH 726817	A4	19740815		

PRIORITY APPLN. INFO.: CH 1972-6817 A 19720508

GI For diagram(s), see printed CA Issue.

AB Acrylic fibers are dyed by a batchwise exhaustion process using cationic dyes and(or) fluorescent whiteners at 60-90° in a nonpolar aprotic organic solvent which contains besides the cationic dye and(or) whitener a fiber-swelling agent, an emulsifier, and water. The dye and(or) whitener has good solubility in water and a limited solubility in the organic solvent.

For example, 3 g dye having the formula I was mixed with 3 ml. 85% formic acid and 100 ml. water at 80°. The solution was combined with another containing 6 g ethylene carbonate [96-49-1] in 50 ml. water and was added, to 12 g mixture of 20 parts coconut oil fatty acid diethanolamide and 10 parts sulfated triethylene glycol monolauryl ether in 1 l. tetrachloroethylene(I). The emulsion was mixed with I to provide 6500 ml. emulsion which was heated to 50° and placed in a circulating dyeing apparatus with a polyacrylonitrile (II) fabric wound on a beam. The liquor temperature was increased to 87° in 15 min and held at this temperature for 30 min. The fabric was rinsed with I, water, and dried. The result was an evenly dyed, washfast, red II fabric.

IT 38582-02-4

RL: USES (Uses)

(fluorescent brighteners, acrylic fiber finishing by, in halogenated hydrocarbon solvents containing swelling agents)

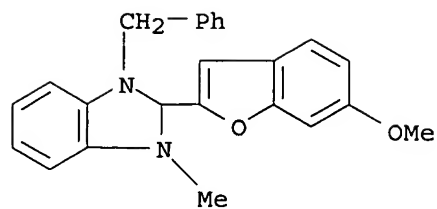
RN 38582-02-4 HCAPLUS

CN 1H-Benzimidazolium, 2-(6-methoxy-2-benzofuranyl)-3-methyl-1-(phenylmethyl)-, methyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 47573-05-7

CMF C24 H21 N2 O2



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO₃⁻

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